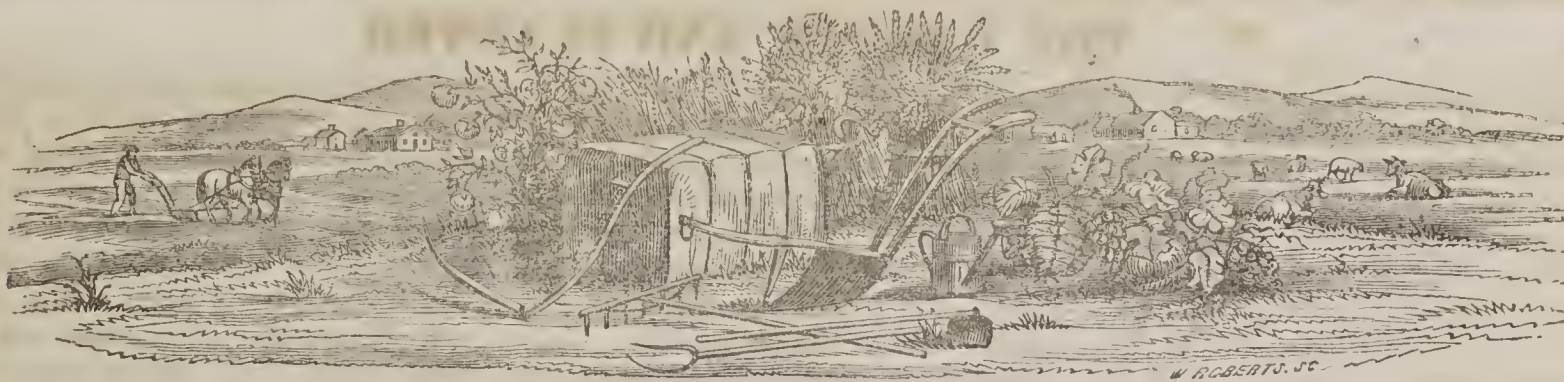


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# FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, MECHANICS, DOMESTIC AND RURAL ECONOMY.

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## The Farmer and Planter

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BY GEO. SEABORN & J. J. GILMAN,  
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### Essay on Manures.

#### CLEARING AND BREAKING UP, AND MAKING COMPOST.

THERE is one thing settled in farming, stable manure never fails. It always tells. There is no two ways about it. There is here neither theory, nor speculation, nor doubt, nor misgiving. "Muck it well, master, and it will come right," is an old proverb. It is considered a fact so well established, that nobody thinks of disputing it. There is advantage in asking why barnyard manure never fails. The answer is easy. It contains all that plants need for their growth. If we know then what plants contain, we can easily tell what is in manure. The whole doctrine of manures, then, falls into two plain principles, on which hang all the law and the "profits" of agriculture.

1st. Plants contain and need certain substances which are essential to their growth.

2nd Manure contains all those substances which plants want. If, then, we would find out what it is which manure contains, that which makes plants grow, we must first find out what a grown plant contains. This cannot be done without some little, a very little knowledge of

chemistry. Do not be startled, reader, I suppose that you may know nothing of chemistry, no, not even its terms. As a very sensible man, who wrote letters on botany to a young lady, said, to encourage his pupil, it was possible to be a very good botanist without knowing one plant by name, so is it possible to become a very good agricultural chemist, without knowing little more than the chemical names of a very few substances.— You know nothing of chemistry, it may be, and as little of law; yet you will go to law, and learn some of its terms by a dear bought experience. The law terms are harder to learn than the chemical terms.

#### NAMES OF SUBSTANCES FOUND IN PLANTS.

Now I fear that some persons, who have followed me thus far, will shut up the book. It is, say they, all stuff, book farming, and beyond us. If one may not understand what manure is without this learning, we may as well begin where our fathers ended, and that was where our forefathers began ages ago. By a little law, however, picked up as a juryman, or witness, selectman, town clerk, justice of the peace, yea, perhaps hearing an indictment read, men do come to understand what a lawyer means when he talks. So, too, by a little chemical talk, a man may understand what a chemist means when he talks about oxygen, hydrogen, nitrogen, chlorine, and carbon; potash, soda, lime, (ah, these are old friends, the very names make us feel at home, again,) alumina, magnesia, iron, manganese, and silex, sulphur and phosphorus. Here is a long list. Long as it is, perhaps it will be thought worth learning, when you are told, that these are the names of all the substances found in plants, every substance which they want

Out of these is made every plant. Every part of every plant, from the hyssop on the wall to the mountain cedar, contains some of all of these. Be not disheartened. Look over, reader, the list again carefully, see how many are old names of things which you know. Of the fifteen, you know nearly one half by name and by nature. These are potash, soda, lime, magnesia, iron, sulphur. Perhaps you will add, that you know carbon is coal, or rather coal carbon. You have heard from some travelling lecturer at your own Lyceum, that oxygen and hydrogen together, form water. That oxygen and nitrogen form the air you breathe; that nitrogen and hydrogen form ammonia, or sal volatile, which gives the sharp smell to the smelling bottle. Besides the thing has been said so often, that you must have heard it, that chlorine, the substance which bleaches in bleaching salts, united to soda, makes common salt; or if chlorine is united to ammonia, sal ammoniac is formed. Now by changes and combinations among these fifteen things, nature makes every thing we find in plants. Many of these are invisible as is the air. The substance called chlorine, perhaps you have never seen, but if you ever smelt it you will never forget it. It is often smelt in a piece of bleached cotton when opened in the shops. It gives the smell to bleaching powder used to disinfect the air, during cholera and other diseases. If you could see it, it would appear merely a faint yellowish-green air. It is all-powerful on vegetation. As it forms a part of common salt, say half of its weight, we may dismiss the further consideration of it, by saying, that, in some shape or other, chlorine is universally diffused in soil and plants



## CHEMICAL SUBSTANCES DEFINED.

The list above may be divided as follows:—First, the airy or volatile; secondly, the earths and metals; thirdly, the alkalies; fourthly, the inflammables. Only the third and fourth divisions require to be explained or defined. The substances called potash and soda are termed alkalies. They are said to have alkaline properties. Touch your tongue with a bit of quick lime, it has a hot, burning, bitter taste. These are called alkaline properties. Besides these, they have the power of combining with and taking the sours out of all sour liquids or acids, that is, the acid and the alkali neutralize each other. This word alkali is of Arabic origin; its very name shows one of the properties of alkalies. *Kali* is the Arabic word for bitter, and *al*, is like our word *super*, we say fine and superfine; so *kali* is bitter; alkali, superlatively bitter, or truly, alkali means, the “dregs of bitterness.”

I wish, reader, for your own sake, as well as my own, that should fix in your mind what I have said about alkali and alkaline properties. Alkali is a general term. It includes all those substances which has an action like the ley of wood ashes, which you use for soap making. If this ley is boiled down dry, you know it forms potash. Now lime, fresh slacked, has the alkaline properties of potash, but weaker, and so has the calcined magnesia of the shops, but in less degree than lime. Here we have two substances, earthy in their look, having alkaline properties. They are called, therefore, alkaline earths. But what we understand chiefly by the term alkalies, means potash, soda, and ammonia. Potash is the alkali of land plants; soda is the alkali of sea plants; ammonia is the alkali of animal substances. Potash and soda are fixed; that is, not easily raised in vapor by fire. Ammonia always exists as vapor unless fixed by something else. Hence we have a distinction among alkalies which is easily remembered. This distinction is founded on the source from which they are procured, and upon their nature when heated. Potash is vegetable alkali, derived from land plants; soda is marine alkali, derived from sea plants; ammonia is animal alkali, derived from animal substances. Potash and soda are fixed alkalies; ammonia is a volatile alkali.—Potash makes soft soap, with grease, and soda forms hard soap. Ammonia forms neither hard nor soft soap; it makes, with oil a kind of ointment, used to rub

a sore throat with, under the name of volatile liniment. But though there be these three alkalies, and two alkaline earths, I want you to fix in your mind, reader, that they all have common properties, called alkaline, and which will enable you to understand their action, without more ado about their chemistry.

The inflammables, or our fourth division, are sulphur and phosphorus; both used in making friction matches. The phosphorus first takes fire, by rubbing, and this sets the sulphur burning. Now, the smoke arising from these is only the sulphur and phosphorus united to the vital part of the common air. This compound of vital air, or oxygen, as it is called, and inflammables, form acids, called sulphuric and phosphoric acids. So if you burn coal, or carbon, it is well known you form fixed air, or carbonic acid.—That is, by burning, the coal or carbon unites with the oxygen or vital part of common air, and forms carbonic acid.—the heavy, deadly air, which arises from burning charcoal, has all the properties of an acid. And now let us see what these properties are. All acids unite or combine with the alkalies, alkaline earths, and the metals. When acids and alkalies do thus unite, they each lose their distinguishing properties. They form a new substance, called a salt. You are not to confine your idea of a salt to common salt. That is a capital example of the whole class. It is soda, an alkali, united to an acid, or chlorine; or, to speak in terms the most intelligible, to muriatic acid. So saltpetre is a salt. It is potash united to aqua-fortis. These have united, their characters are neutralized by each other. They have formed a neutral salt. Our list of substances found in plants is thus reduced from things which you did not know, to things which you do know; and so we have saved the trouble of learning any more of their chemistry.

We have reduced the airy or volatile into water, formed of oxygen and hydrogen; or volatile alkali, formed of nitrogen and hydrogen; or into acids, as the carbonic formed of oxygen and carbon—as the sulphuric, formed of oxygen and sulphur—as the phosphoric, formed of oxygen and phosphorus; and having thus got water and acids, these unite with all the alkaline, earthy, and metallic bodies, and form salts. To give you new examples of these, I may mention Glauber's salts and Epsom salts. Glauber's salt is formed of soda and sulphuric

acid; Epsom salts of magnesia and sulphuric acid; alum, of alumina, or clay and sulphuric acid; green vitriol, of iron and sulphuric acid; white vitriol of zinc and sulphuric acid; plaster of paris, of lime and sulphuric acid; bones, of lime and phosphoric acid; chalk and limestone, of lime and carbonic acid. These are all examples of salts; that is, an acid, or a substance acting the part of an acid, united to an alkali, metal, or earth.

PROF. DANA.

## Hewers of Wood and Drawers of Water.

MESSRS. EDITORS:—Your “monthly journal” is indeed a very pleasant visitor. Would that its pages were more extensively circulated and more carefully perused, and many of its suggestions more faithfully practised. Our people are truly an intelligent people, and we may properly be said to be an industrious people. But notwithstanding our boasted intelligence, in connection with our perseverance, we seem doomed to become “hewers of wood and drawers of water.” In other words, while we might be an independent people, rolling in all the luxuries of civil life, we are in some measure, and likely to become more so, a dependent minority. Doubtless this state of things is the result of ignorance as the extreme remote cause. Selfishness of a peculiar kind, has almost an unbounded influence. As a more proximate cause, “*the unparallected cotton mania*” may be adduced. The hope of securing a certain amount of “the almighty dollars”—a desire to excel in the number of “bales,” lead men off until they seem to lose sight of all other sublunary objects; and many of them even worse, they appear to have forgotten, or never to think of, objects terrestrial.

I am pleased to see that some of your correspondents are venturing to speak out on this subject “*More corn, less cotton.*” If the Southern States would spend a small portion of their time, through their delegates, in an *Agricultural convention*, we would be likely to realize as much actual benefit as we do from so much political convening, &c., &c. Is it possible that the South will never be united on any subject in which her own interests are involved. Brethren upon you the responsibility lies; will you not give this subject such attention as its importance demands, and for the sake of peace, comfort, prosperity, and the privilege of quietly securing our eternal peace under our own vines.—Will you not lay aside so much of the hindrances as will enable us to meet and adopt such measure as will eventually make us that people we should be? If we should fail to become that people which it appears the God of Nature has provided for us to be, be assured the fault will be ours. Union of sentiment, and concert of action, will secure to us every blessing earth can bestow.

LATE BEGINNER.

Tylersville, S. C., Sept. 1850.

THE cheapest labor is one's own. The best is just like it, for it is what is done by ourselves.



**Farmers, change your Policy.**

MESSRS. EDITORS.—Somebody says, we are tired of generals, we want something more definite, something of the minutiae of cultivation—or that sort of chat. As to my own peculiar views, it matters not, I would as soon write you how to lay a fence worm, as how best to prepare for the future welfare of your children.—And being only competent to the former, I ought to do it and not risk censure. Yet I cannot for the life of me discard from my mind, that the planters of the South require their negroes, horses and writers, to make cotton all the time. I cannot close my eyes to the *Delta's* commercial matter (a New Orleans journal) of August 16—265,410 bales received at all ports over the receipts for 1850, and price 3½ to 7. Our best cotton not over 7. Nor will I keep back my pen from writing and re-writing and writing again, that it is folly for any sensible man to be laboring to advise his friend how to prolong life, when that friend is constantly going into excess. My friend A. B. calls up on me, and says Dr. C., can't you give me some particular medicine that will restore my broken constitution? I admit that I have wasted away my prime, but your experience can help me, will you not? As an honest man what should I say? what should I do? I ask each reader, and I "pause for a reply." My own notion is, I should say, wait awhile with patience until I see you amend your ways. If I give you something which experience proves will tend to restore you, you will immediately relapse into your former excesses—you will bow your head and bend the knee to your old idols—you will only gain a little vigor to drink another surfeit of the old enemy.

Apply this to the planter. Tell him how he may increase his crop—he will be satisfied, but that merely keeps up the disease—large crops and low prices. But tell him how to improve his land, and should he try for a little he will soon turn to his old way. I ask, where is the man who has been prudent this year? I mean who has not tried to increase his cotton crop and not neglected his corn. I believe there is vast gain in improved culture, manures, and in improving seed, but if these are to be used merely for increasing the cotton crop, it is a madman's part to give them. I pledge my reputation to the public, that although I have this year turned over every foot of my land with a two horse plow—although I have sixteen work horses and three yoke of steers, with two wagons, to seven hands—although implements of all kinds—although nearly every cotton seed planted has been selected—although I have nearly one hundred acres in pasture, yet my cotton crop does not claim to be as large as last year—a part of it is guess work, and taking the largest figures in the uncertain part to make it equal. I say this to show that I scorn to advise what I will not practise. I believe our true policy is, to plant less cotton and more corn. I have done this, and now enough is seen to warrant me to offer for sale more corn than I will use in 1851.

I have felt a deep, a glowing interest in the agriculture of the south, and at this time for South

Carolina. Had I the talent, like Wm. Harper in nullification times, I would take my camp and kettle and journey throughout Carolina, working, striving, and laboring with my brethren, endeavoring to get them to look to home and their own interests. A crop of two million bales is worth one hundred millions of dollars. A crop of three millions will not nett an average of six cents, and therefore less than seventy two millions—a certain loss of thirty millions of dollars, with at least ten millions worth of corn, meat, &c. lost, which could be made with the two millions of bales. I do not know that I would err in placing the loss at fifty millions of dollars.—Certainly I can have no interest aside from that of a cotton planter. I am not a merchant, nor the son of a merchant, nor the brother of one. I am no politician, nor the son or brother of one. I never run for office but once, and was then beaten, there being really an uglier man in college when I wanted the boots. I am old enough to be wiser and better—well no odds—I know that we can make corn, some meat, shear a few lbs. of wool, raise a colt or two, and then make our portion of two millions of bales. And will any man say this is an unwise course? Will any man say there is less pleasure in feeding a few swine—less interesting the playfulness of the lamb, and the frolicking days of the colt, than in growing cotton to buy them with?

The great, the grand object now is, to change the policy. We must have the principle changed. And the writer of this is almost inclined to declare he will write no more, (or only to change) until a different policy be adopted. This may seem rather dictatorial, indeed I hope not, for I would please all in my power. Yet, this pen is my own, and the little knowledge I possess is my own, and unless I can feel conscious I am not doing harm, I would err in using either.—The time never will be but what there will be men among us, with enough yankee principle to plant every acre in cotton, when others are planting less, but let it be. At this time I do really believe there are more acres in cotton than for five or ten years, and thanks to our beneficent master, the prospect is there will be less made than last year; yet, as we were mistaken 200,000 bales, we had better say naught. More of this in my next.

Yours, in deed and in truth,

Colo.

**Fruit.**

If it were in my power to communicate to the Farmer and Planter anything that would interest or benefit your readers, I would spare no pains in doing it, but as I do not feel sure that I am, I must content myself in reading from others and perhaps occasionally suggesting an idea as some slight return for what I receive from them.

I regret very much to hear that provision crops are light in different parts of South Carolina and the adjoining States; but I fear that too much attention has been given to cotton the past season to

ensure a good provision crop. Now is the time if crops are short to splice them out with turnips and small grain, cabbage, &c., if a man makes but a half crop of provisions, and manages right, he can get along without buying; for our country affords many crops and kinds of crops in one year—different kinds of small grain, and an abundant variety of vegetables, if a little care is taken to cultivate them; and a great variety of good fruit, some kinds being abundant every year.

The first thing for every young farmer when settling, ought to be to select a good supply of fruit trees, and give his careful attention to raising an orchard of good apples, and not depend upon the few old stumps of trees that his father planted, because Mr. A or Mr. B asks him 8, 10 or 12 cents for trees. It is some trouble to graft trees and attend to them well; 20 or 25 cents would not be very high for good fruit. Each tree, well cultivated, would be worth from 5 to 10 dollars in five or six years. As for peaches the man who can peel and eat the peach, can plant the kernel and raise trees, judging a good variety from the taste. By making proper selections the fruit may be enjoyed from the first of July till frost.—The overplus from family use furnishes excellent food for hogs; sweet apples are good for hogs, and mulberries also; we have a kind ripe and falling from the first of May till the fourth or tenth of July.—Why not rear an orchard of these purposely for hogs, especially if we can procure the variety spoken of in the Southern Cultivator which lasts until September. I would not have any person suppose I encourage waste of time and money by purchasing and planting trees on a worthless piece of land without manure, and open to stock; in the course of a few years, when the trees ought to be bearing, we shall hear him say, I planted some trees but the cattle broke them all down; but select a good lot of land for apples, and if it is not rich, make it so by manure, high land with clay foundation.

For peaches a rich soil is not necessary but high and dry land is no objection.—Mulberries will grow almost any where, on high land the richer the better, but horses, mules, cattle, sheep, and goats will break and eat them up as they would apple and peach trees, if allowed to run among them, and some horses will bark them if they are large trees. Plums are also easily raised, and are quite palatable to most persons and are fine for



hogs. Figs are good for every body, but we have not been so fortunate as to learn from experience the effect they would have on hogs, as they require more attention than they generally get to make enough for the people. Grapes are very easily raised, many varieties that I am acquainted with, but he that gets a cluster of grapes too often I fear *will want a doctor*: believing this, I take them uproot and branch. This is only a notion of mine, however, and as most persons love a bunch of grapes let them get about raising them.

There are many kinds of cherries but as I have not seen any about here that are worth any thing but to feed birds on, I cannot even recommend cherry bounce.

The pear is a fruit that I had almost forgotten: they are good and every body loves them, but very few give themselves the trouble to raise them; I say *trouble*, because it is a trouble. If the man that plants them is not a young man of very constant and steady habits, he will leave his pear orchard for his posterity to pluck fruit from. It generally takes pears with best attention, 10, 15, or 20 years to bear after being grafted, as I have learned from those who have raised them.

I have just named a few of the most common varieties of fruit, because it is so much neglected and so much loved by subjects of the most refined life, as well as down to the lowest cottage, and yet so little attention paid to raising it. We could name several old grey headed men who have never had an apple tree in their lives, and if we had to select the greatest lovers of fruit that we know of, we would select them. I would like to know why men blessed with so long a life, have not raised an orchard, when they have always made any thing that any person could call for, that farmers make, except fruit. But every one to his notion. We know some men that have apples all the year, peaches through the summer and fall, and various other fruits constantly in fruit seasons.

#### More Corn---Less Cotton--No. 2.

MESSRS. EDITORS:—In closing my last I remarked, “more of this in my next.” I ask of all who have the management of agricultural associations, if they cannot do something to effect a change?—But I am too fast. I am taking for granted that my brethren all think as I do.—And, probably, the officers of societies may think that Colo, had better *cultivate*, and not try to teach or direct. Enough,

my seniors, I stand—no, I sit (now) rebuked. Yet I intend to tell my friend Mooty, at my elbow, what I would do, if I had the care and control of a society.—I would invite essays, by offering a medal, one worthy of attention too, on the best mode of improving land; on the surest way of increasing the nett profits of a farm, with the figures. I would give premiums on the largest quantity of corn, pork, wool, and colts raised per hand. The cotton crop stated so that no one for the mere sake of premium, without true interest and profit in the business, should be entitled to premium. I do not fancy paying for a fat hog, that has already cost its master 6 to 10 cents per pound—nor for an acre of corn that costs 50 to 75 cents per bushel, for the corn grown upon it. I would pay premiums on summer and winter pastures; upon per hand grain crops; upon per hand sweet potato crops; per hand pindar crops; per hand turnip crops—taking it for granted that could I induce planters to have grain and grain fields, sweet potatoes, turnips, pastures, &c., &c., that somebody's stock would get the advantage, and that wool would grow; and that if it were not shared, that it would drop off; and after a while the Gipseys which have just arrived in New York, would hear of it, and come south and gather it up. Now, Mr. Mooty, what do you think of all this? You have been raised in Fairfield—you never went to college, and never learnt high foluten notions. Do you think any good can result? Listen, Messrs. Farmer & Planter—Mr. Mooty talks—“Why, Mr. C., I am a little inclined to favor your ideas, but you talk so fast, and make things look so certain, that I am afraid of you. I know myself, well, that if a man will make all these things, that he is bound to have a great deal of manure to haul out. I know that this land will produce more cotton to the acre, and that he can thus have more time to make his corn, &c., &c.; and I am right sure that in a few years he would make four or five bags of cotton to the hand easier than he now does.”—Ah! yes, Mr. Mooty, that is the old song, but that is not my policy. It is to induce all men to make something else for sale, and thus, by selling a bale of cotton per hand less—he will have \$20 or \$50 more at the end of the year. You know, Mr. Mooty, that newspapers and leading men, do more to form public opinion in America than in any country upon earth. If you can only get them to fix the stan-

dard of excellence higher than the mere dollar and cent valuation, we will soon have a change. Do you, Mr. Mooty, read a paper published in Pendleton, S. C., another published at Augusta, Ga., both on agriculture? “No; sir,” says he, “I read the South Carolinian, and some times see something about agriculture, written by some college bred man.”—That will not do, Mr. M., if you wish your calling to prosper, you must support your papers. The paper you read, I love dearly—I love its name, and I love the earnest zeal that impels the editors; but you should read the Farmer. I intended to ask you if you had seen some remarks about Bermuda grass in the Farmer, and other remarks about Muskete in the Cultivator. I assure you, sir, I have seen one dozen large oxen, and several head of mules upon a pasture of the former not to exceed seven or eight acres (probably not six) for days and weeks. Who would refuse to rear sheep, and hogs, and colts? Could you not afford it well? I know the man, who only knows what a pasture is by the talk of one and-a-half acres per head, cannot realize two head to our one; but, sir, I assure you I tell you truth. I have at this writing, six yoke of as pretty oxen as ever a whip was cracked over, and they would make better beef, than some animals I saw once about “Bulletin town” near a certain city in our State.

If we can see large summer and winter pastures, we may then count upon seeing good beef and mutton raised at home; we can then look for manufacturing our own leather; we may then wear our own woolen goods; we can then—be independent, and our cotton, if worth only six cents, will give us twenty-four dollars nett, as all we make by cotton, and a little more, will be our own. We will then need fewer politicians, and much fewer factors. We will hear less about the commission merchants of New Orleans and Mobile *toting bricks in their hats*. I suppose those who talk this way mean, that these merchants are so proud that they carry their hats poised on the top of their heads. My notion is, if we will attend to our interests that these merchants and all, will not have such big pay. I tell you, when we all get out of their clutches, our cotton will sell better, weigh more; interest not so high; risk of fire, river, and shippage, and storage, &c., &c., how many more leaks I don't know, will all be stopt. I do not say the leakage goes to the merchant—but I do say



they can live high, and get rich, while we clod hoppers have our nose to the grindstone. Just here Mr. Mooty rather awoke, as it were, at the sound of the grindstone, and says, "go it, old fellow, grind on—grind 'em well." COLO.

#### Education of Farmers' Daughters.

As I cannot think the Farm Journal designed to lay before its readers such matters only as relate to plowing, planting, mowing, reaping, &c., and the education of farmers' sons, I ask a place in your columns for a few remarks on a subject interesting alike to all—the education of farmers' daughters.

Much has been said and written on the subject of education. The merits of colleges, academies and agricultural schools have been thoroughly discussed. But these all refer to the boys, while the girls are wholly uncared for, as though the cultivation of their intellects was a matter of trifling importance. The general impression seems to be, that they would make just as good wives and daughters with no more education than enabled them to read their Bible and almanac, as if their intellectual training were such as every farmers' daughter should be.—Does not the mother exert a controlling influence over her child; and do not her teachings and example, in nine cases out of ten, mould its future character? Many of the greatest and best men who have ever lived, attribute their virtues and greatness to the tender counsels of their mothers. Who among us, does not owe much that is commendable in our characters to the same source? How frequently do we hear the folly and wickedness of individuals attributed to the ignorance of their mothers?

If, then, so much depends upon the kind of teachings a mother is capable of imparting to her children, how important does the education of the farmers' daughters become, and with what solicitude should parents endeavor to prepare them for the highly responsible stations of wife and mother, which they may be called to fill?

Although my remarks will apply with equal force to all classes of society, my object is, to draw the special attention of farmers to this subject, because I think it has been less seriously considered by them than it deserves to be. Now-a-days, almost every farmer possessed of the means, appears desirous of giving his sons a liberal education. This is highly commendable; but at the same time it should not be forgotten that his daughters have an equal claim upon his regard. It is, with me, a question, which of the two—the education of the son or daughter—is the most important. But leaving this question for the present, it is enough for us to know, that the prosperity of the individual, the family and the nation, demand that where it is practicable, the blessings of education should be extended to all.

Almost every farmer who has given his sons a liberal education is convinced of

its utility. If education is beneficial to the son, why not to the daughter? Are her duties any less important than his? Has she not the moulding of the character of future generations? Should not the mother be competent to instruct her offspring in many of those branches of education in which her gentle care and affection make her the most fitting instructor? None but those who have never known the inestimable value of a kind mother's teachings will dissent from this.

But my remarks are growing too lengthy; I shall therefore conclude them for the present, promising to renew the subject in future numbers of your valuable paper, should you deem them of sufficient importance to present to your readers.—*Farm Journal.*

#### Notes of a Tour in Europe.

It is believed the following letter from the Albany Cultivator by Wm. R. Sanford, will repay a perusal. We read it with much interest, but having learned that a lady of great intelligence in this neighborhood, not in the habit of reading agricultural papers, has been entertained by it to its conclusion, we conceive it demands a place in our pages. The comments upon the condition of Spain show to what a degraded and melancholy state, a country fertile in lands, delightful in climate, and abounding in all the resources of wealth, in all the natural advantages of a paradise, may be sunk.—Note the sentence, which has but too much truth—"If any one wants to see poverty, let him travel through Spain." From this may be drawn not an unprofitable moral.—Eds. F. & P.

In compliance with your request, I will endeavor to give a short account of a tour in Europe. I sailed from New York, Jan. 24, in the packet ship *Splendid*, for Havre, France. We had three days of pretty rough weather; the rest of it quite fine. We had a passage of twenty-four days. I was very sea-sick about half the way, which was anything but pleasant, I assure you. Mr. Greely has pictured it very fairly in his description of crossing. Havre, I found to be a very busy place, as of course it must be, it being the great shipping port of France.—One of the first things I noticed, was the horses that they work in their carts; they were very large and strong built, and carry enormous loads with them. I think they are preferable to any I ever saw for draft-horses, especially for cart horses for our cities. I had to stop one day in Havre to get my luggage through the custom house, and my passport vised, which is a very great annoyance. I started from Havre at 11 o'clock, A. M.—arrived at Paris 5 P. M. The rail road runs a good part of the way up the valley of the Seine—most of the way a beautiful country, and in a good state of cultivation. They were plowing and sow-

ing their spring wheat. The plows are cumbersome and awkward things. They have long beams—the fore end of the beam mounted upon a pair of wheels about half the size of a wagon wheel.—Paris is a splendid city, so far as outward show is concerned. There appears to be very little business done in comparison with our cities. I shall not attempt a description of the city, as my business was to see the stock of the different countries I visited.

The first flock I visited was Mr. Gilbert's; he has not only a good flock of sheep, but good horses, and some fine cows. He keeps about 25 cows; some of them have the appearance of being fine milkers; they are well cared for, and are in fine condition as well as the rest of his stock. He has good warm stables for all his stock. Nothing is left out, unprotected. In fact it is the custom through France and Germany, to shelter their stock in the winter season. He appears to be a man of a good deal of intelligence and a good farmer. I found him to be kind and obliging. After looking over his stock, he took me a few miles from his place to see the agricultural school at Gruno. It is a government establishment. They have a large farm connected with the school, and are breeding most kinds of stock. Their policy is to cross every thing in the sheep line. They are making a cross between English and Merino. They have English ewes and Merino rams. Of cattle, they have all kinds—French, English and Swiss.—Their bulls were mostly Swiss, of good size and pretty well formed, but had handlers. They have some very good hogs of the English breed, and were making a cross of the English and Chinese. The farm appeared to be in a high state of cultivation. Great pains were taken to make and save all the manure.

The next farm I visited was the government farm at Rambouillet. The stock here, is principally sheep. It is the place where the Spanish sheep were first placed, and have been bred by the government ever since. There is a palace there, but not in a very good state of repair at present. It was formerly quite a favorite place of resort as a summer residence for the Kings of France. The Director was very courteous, and took every pains to show the sheep, samples, &c. They have samples of every sheep that they have sheared since they commenced. Everything is done systematically. They have paintings of most of the bucks that have been used. The form of the sheep is not as good as some other flocks that I saw, but the wool is finer. The Director gave me some beautiful samples. They sell only once a year, and then at public auction. They sell all the bucks that they raise in that way, except such as they reserve for their own use, and ewes, if they have any to spare. They sold no ewes this year.

I next visited Monsieur Cughnot's farm, who has about the same number of sheep, and about the same quality as Mr. Gilbert's. These three flocks stand at the head. They are the places where



almost all resort for bucks. I met a good many sheep breeders from different sections, at those places, buying bucks.—February is the month in which they generally select their bucks for the next season. They universally admitted that Messrs. Gilbert and Coughnot had the best sheep in France.

On returning to Paris, I fell in with Mr. Geo. Campbell of our State, who was on the same business that I was, (after sheep.) We therefore concluded to travel together, and purchase in company. We concluded to go to Spain first, as that was the place where the fine sheep came from, and see what we could find. Started from Paris, Feb. 4, went 150 miles by rail road to Tours. The country, a good part of the way, quite poor; saw very little stock. We passed several miles through a valley, I should judge from six to eight miles wide, with a continuous village at the foot of the hills on each side of the valley. The valley is meadow and pasture; the hills are planted to vines. Every few rods is a wine vault, all the way. At Tours we took the diligence—found beautiful roads and quite level. The roads are in perfect repair; they keep stones by the side of the road, broken fine, and persons on the road to keep it in repair. As soon as they begin to wear down in any place they put in some of this broken stone.—The road will be as straight as you can draw a line, as far as your eye can extend. In the south part of France and north part of Spain, they have trees planted each side of the road; many of them have got to be of good size, and form a beautiful shade; they are generally popular. They drive from five to six horses—three abreast—go at the rate of from nine to ten miles an hour. Their horses are large and generally in fine condition. They are a very strong, hardy race of horses. As you approach towards the south of France, you begin to see oxen at work. The first I saw were poor and small; the way they work them is to lash a stick back of their horns, which is the way they do all through France and Spain, and drive them with goads. I never saw then use a whip in Europe, to drive oxen. They take no pains to match them, either as to size, color or sex; sometimes they will have a cow and an ox yoked together. As we go south, we found the vineyard more extensive and the vines larger; they were thinning the vines. They keep them headed down to about two feet high; they bind the parts they take off into bundles for fuel; some they cut close to the main stalk, and others they leave about three feet long. They plant them out in different ways; sometimes they occupy all the land. They put the rows from four feet to four rods apart; when they do not occupy all the land, they till it between the rows; a good share of it was in wheat.

We arrived at Bordeaux, at 8 o'clock, 2nd day. Its principal trade is wine and brandy. We started from Bordeaux at 8 o'clock next morning—arrived at Bayonne at seven the following morning, 175

miles. The country, part of the way from Bordeaux to Bayonne, is poor—some of the way a perfect desert; and the inhabitants look as poor as the country. After leaving Bordeaux, I noticed that they had the inside horns of their oxen sawed off to about 4 inches long.—About half way from Bordeaux to Bayonne, we found another kind of cattle; they must be well bred, as they are all alike. I have seen sometimes twenty yoke, I should think, in a string, and any two of them would match. They are not large cattle, but well formed, tight snug built—a yellow red color, with horns about the medium length, well formed, and stand about right—we found this kind of cattle for about 100 miles in the south of France, and about the same distance in the north of Spain. They make fine oxen, but what the cows are for milk, I did not learn. The women do most of the marketing in France. In the morning, at Bordeaux, and the same at Bayonne, the roads were full of women, carrying their stuff to market; some with mules, but more with donkeys; their stuff put in baskets and slung on each side of the donkeys, and would often weigh more than the donkey. But the greater part carry their vegetables, fish, or whatever they have to carry to market, in baskets on their heads. The diligence starts from Bayonne for Madrid. We had to stop over one day to get our passports vised. We entered the Spanish territory about twenty-five miles from Bayonne. A small river divides the two countries; the French flag is flying on one end of the bridge, and the Spanish on the other—we had to have our passports vised by the police on leaving France, and again on entering Spain. The country we passed the first day was very good; they raise large quantities of turnips, which stand in the field through the winter. We came to the mountain about dark. They had to put on oxen in two or three places to draw up the diligence. They drive mules principally in Spain—usually from five to nine.—They are very cruel to the mules, the whip being in almost constant use, sometimes by two drivers, one on the box and another along side a foot. I have seen these Spaniards run two or three miles at a time by the side of the mules, on a full gallop, whipping all the time. A good share of the way after striking the mountains, the country is miserable, and the inhabitants more so. If any one wants to see poverty, let him travel through Spain. I have counted ten beggars at one time around the diligence; they are at all the stopping places, and at the hills where they have to walk the team, you will find them stationed. Every thing is done in Spain, I should judge, as it was a thousand years ago. A great share of the stuff goes to and from the market on the backs of mules and donkeys. As you get near Madrid, the road is full of them. Saw very little stock on the way but sheep, and they of a very inferior kind. In the north of Spain and south of France, they have the poorest sheep that I ever saw. In many

of the flocks two-thirds of them will be black—their sheep are small, with coarse wool, and are ill-formed.

The tools used here are very rude and clumsy; their plows are a crooked stick, the mortise through the upright part, just in the turn, and put through a piece of iron which runs along the top of the lower part, an inch or two beyond the point of the wood. With this apology for a plow, they scratch up the ground. In some parts of Spain I saw fine looking crops cultivated in this miserable way, and without manure. Very little use is made of manure in Spain, except to burn the land. The land must be very strong and rich to bear such crops with such cultivation, and without manure.—We were three days and two nights from Bayonne to Madrid.

We called on our Minister at Madrid, and found him very ready to do all in his power to assist us. He is a gentleman well fitted for the place, and is very much respected. On inquiry, I found most of the sheep owners lived in Madrid; but the sheep were about two hundred miles from Madrid, in Estramadura, in their winter pastures. I became pretty well convinced before leaving Madrid, by conversing with the sheep owners, that we should not find anything we wanted.—Some of them admitted that their sheep were much degenerated, and they thinking about taking some measures to improve them. They said they were going to Germany to get bucks. All said their sheep were not as good as they were before the French invasion—that they had no standard flocks to resort to for good sheep, as they had before these good flocks were broken up. But as we had gone so far, we concluded we would go and see for ourselves. When we examined the flocks, we found them about as we expected. The sheep, as a general thing, are small—no wool on their legs, and very light colored—occasionally there would be a good looking sheep in the flock, bearing some resemblance to those that were formerly brought from there, but with no characteristics. I should not dare to breed from them as there would be no certainty in breeding from such animals. I did not see a sheep in Spain that I would pay the transportation on to this country.

Estramadura is one of the wildest parts of Spain, and is rather a hard place for an American to live. Everything is cooked with garlic and oil. It is a great place for olives, thousands of acres being covered with the trees. They raise a good many hogs in this part of the country. I have seen sometimes two hundred in a drove, all black. They are never fed, and are kept by shepherds, the same as their sheep. They get fat in the fall, on olives and acorns. There are a good many coarse sheep in this part of Spain. They raise this wool for their own use. They manufacture their own cloth, both wool and linen. Their process of doing it is very slow. I saw them getting out and spinning flax. It is all done by the women. They take a stick about three feet long, tie the flax on to



one end; the other they hold under the arm, and pull out and twist with the other hand. It hardly seems credible that people will live and do as they do.—There are large villages where you cannot find a light of glass. They have only one door to their houses, and everything goes out and in at that door. The stable is in the back part of the house, and the animals have to pass in at this door, and the manure out the same way.

After looking among the sheep till we became satisfied that there was nothing we wanted, we put back for France.

Respt'ly yours, W. R. SANFORD.  
Orwell, Vt., June 24, 1851.

#### Choice of Mules.

It is unquestionable that the mule for some purposes is the most economical brute force that can be used. It would be an ill-judged act to put the fleet race horse to the heavy draft of a freight wagon, and it would be not less ill-advised to groom and train the mule for the race course. Each has been formed by nature for services of a particular character, and one cannot be made to bear the burdens of the other without a misapplication of power and consequently a loss to the owner. Much of the odium that has fallen upon the mule, as an economical motive power, has been in consequence of a neglect to consider what kind of service his physical structure is suited to. If he is wanted for heavy draft, he must have the weight and bone. If for the plow, the purchaser should turn his eye to the peculiarities of the land to be worked.—Stiff clay lands offer great resistance to the plow and require great strength in the animal used for plowing. The mule for service in these should be selected for his power of endurance and strength. These qualities are generally found in the mule that most resembles in form and appearance the Jack. The guiding rule, then, in a purchase, would seem to be, to take those most unseemly to the eye, having large legs, a stout body, long heavy ears, a large and bony head, and sleepy eyes. These are best able to endure the hardships of severe and continued labor, also the abuse and neglect they have to receive from the negroes. If the land is light and sandy, such as prevails to a great extent in the low countries of the South, quite different qualities are in requisition. Speed and a more rapid motion are in demand, and we should select those with limbs longer, less clumsy and to the eye more muscular, with eyes quick and bright, ears slender, body more rotund and smaller in size. In a word more like the horse. We believe if planters were to select their mules when purchasing upon these principles they would be much the gainers.

#### Rice Crop without a Spear of Grass.

THE following is an extract from a private letter by a gentleman held in high repute as a rice planter, and distinguished in the council chambers of State. We shall no doubt gratify many of our readers by placing it in our columns. The account of the condition of the rice fields and of the potato crop inspected, is really refreshing.

It will be remembered in August last we published a paper by Dr. SPARKMAN, of Georgetown, (S. C.) upon the Sweet Potato. That paper we then characterized as, in our humble opinion, very able and complete. Since that time it has been pronounced by gentlemen from various parts of the State, who are as competent to judge as any to be found, unequivocally the best essay on this root that has ever been published within their knowledge. This crop is a very valuable one, but more tedious to cultivate, and more difficult to preserve, than any other. The extract containing, as it does, some interesting facts upon this tuber, reminds us to suggest that, unless the particulars of this treatise by Dr. SPARKMAN, are fresh in the mind, time would be well spent in turning back and reading it again:

Waccamaw, Sept. 16, 1851.

"I made one of a party of neighbors who inspected their (Dr. Heriot and Lt. Gov. Ward's.—Eds.) crops last week.—1300 acres of Rice and not a spear of grass showing its head! This includes both places. The rice would average about 50 bushels (45 to 75). There were many acres bearing rice promising 50 to 60 bushels, which, 12 years ago, did not make over 30. One has manured with rice straw—the other with rice chaff and flour.

I cannot withhold from you an account of the potato crop on the latter place—52 acres in one field! 33 of which are slips planted in June, after removing the oat crop, of which, there is no one acre that will yield less than 300 bushels, and the greater number will produce 5 or 600 bushels, some even more. The beds are 4½ feet apart, and the surface is entirely covered by vines and leaves. To an experienced eye, I can conceive of nothing, on the up land, more cheering and beautiful than this extensive field of nutritious tubers, with one narrow cart-way winding over the red soil. The succulent vine is as green and rich as the most luxuriant meadow—and the production will be more abundant than the finest corn or wheat could be on the same space.

Dr. Bachman says the caterpillar which we have had, and which has been mentioned to you, is not the "Cotton Army-worm." I presume the notice of that excellent naturalist and valuable citizen, recounting the habits of the worm, has not escaped you. It appeared in the "Mercury," some 30 days ago, and was republished in the Temperance Advocate.

We intend to make the views of Dr. Bachman a matter of record, and shall avail ourselves of the benefit of the journal of Meteorological phenomena as suggested. Statistical information is always acceptable.—Eds.

#### First Frosts.

From a journal of the weather and interesting facts generally, kept in this place for many years the following notes are taken:

"1833—October—First frost 22d, Mercury 31°. Second frost 23d, Mercury 27°. Third frost 24th, Mercury 30°. Fifth frost 25th, Mercury 31°. Drought from 22d June to 29th July.

1834—Wheat harvest 16th June. First frost Oct. 19th, Mercury 26°. Second frost 20, Mercury 26°. Third frost 21st Mercury 30°. Summer rainy.

1835—Wheat harvest 19th June. Summer seasonable. Light frost Sept 25. Second frost 26th; second frost 30th; fourth frost Oct. 7, Mercury 32°. Fifth frost, 8th, Mercury 31°.—Sixth frost 9th, Mercury 31°.

1836—Wheat harvest 20th June. Pretty dry summer. First frost, Oct. 5; 2d frost, 6th; 3d frost, 17; 4th frost, 21; Mercury 32°. 5th frost, 22d; Mercury 30.

1837—Wheat harvest June 28th. Frost Oct. 15th, 16th, 27th, and 30th; Mercury 30°. Nov. 2d. frost.

1838—Frost Oct. 11th; 13th, frost, Mercury 32°; 29th, frost, Mercury 27°.

1839—First frost Nov. 6th, 8th, frost; Mercury 26°.

1840—Frost. Oct 25, at Abbeville.

1841—Frost Oct. 15; Mercury 30°. Frost 22d; Mercury 28°. Frost 25th; Mercury 24° Frost 26th; Mercury 22.

1851—Frost Sept. 28 and 29.

AURORA BOREALIS.—As our October number was already in type at the occurrence of this phenomenon on the 29th of September, it was too late to chronicle it in its appropriate place. We therefore refer to it, simply to make it a matter of record in this number. It is believed to have been the most brilliant polar light seen in this latitude, within the recollection of the oldest inhabitant. It will be understood that the phenomenon takes the name of *Aurora Borealis*, from our local position on the earth. Were we inhabitants of 50° or 60° South latitude, we should see a similar appearance in the South, which of course would be called *Aurora Australis*. Baily supposed the cause of the polar lights to be magnetism. Biot ascribed them to a volcanic origin. Franklin, to electricity. Hell, to the reflection of the sun on the snow constantly floating in the atmosphere of the polar regions. Mainan, to the atmosphere of the sun. Haller attributes the cause to the electricity of the earth rising periodically to the poles.

Feather Beds should be aired once a week.—Yes, and always in the crater of Vesuvius, or some other fire that would be sure to destroy them, for few things are more unhealthy to sleep on, especially during hot weather. They exhaust instead of invigorate the system.





THIRD DUKE OF CAMBRIDGE—PROPERTY OF J. M. SHERWOOD AND A. STEVENS.

MANY of our readers will, no doubt, recollect seeing accounts of the celebrated Short horn stock, of the late Thomas Bates, of England. We give above a portrait of the 3d Duke of Cambridge, which was bred by that gentleman. He was imported by Colonel J. M. Sherwood, of Auburn, and Mr. A. Stevens of New York, and is considered, says Mr. Allen (in the *American Agriculturist*, from which we take the account, and through whose politeness we have procured our cut,) one of the best bulls ever brought to America:

He was got by Duke of Northumberland, (1,940,) out of Waterloo 2d, by Belvedere (1,706); out of Waterloo 1st, by Waterloo (2,816); out of Lady Antrim by Waterloo (2,816); out of Anna by Lawnsleeve (365); out of Angelina by Phenomenon (491). See *English Herd Book*, vol. iv., page 614, No. 5,941.

We think this cut is engraved in superior style; and trust that the animal it so faithfully represents, will leave a numerous and highly improved progeny behind him.

The 3d duke of Cambridge won the first prize for bulls in aged class of shorthorns, at the show of the New York State Agricultural Society, held at Syracuse, in September, 1849.

#### Remarks on Breeding.

As AN illustration of the effects of *in-and-in* breeding, the following instance is related to us as having occurred in a particular neighborhood of this county. A farmer of a sour, unsocial disposition, who, as much as possible, avoided all intercourse with the rest of the world, and shunned asking the slightest favor of a neighbor lest he might at some future time be desired to reciprocate the kindness shown him, for a long series of years, bred his cattle entirely from his own stock. In consequence of this such a herd of mis-shapen, ungainly, big-headed quadrupeds were produced that they could scarcely be recognised as belonging to the cattle kind; and "——'s wolverines" were for a long time the butt and ridicule in the whole vicinity.

The careful breeder upon either system, will avoid using even for a single season, any animal possessing obvious defects; for such defects, once introduced in but the slightest degree, are liable to be transmitted and reappear after sever-

al generations have passed. To the many curious and valuable facts already on record relating to this subject, the following may be added:—"A portion of the fowls possessed by Constant Clapp, Esq., were formerly of the "downy" breed. But this variety so strongly marked, had run out and entirely disappeared from his premises for eight years, when three of these downy individuals, perfect in every particular, reappeared among his flock—showing that the blood, though apparently obliterated, had yet been lurking there, generation after generation. [This is what is technically called in breeding, "crying back."—Eds]

It was a favorite theory with the late distinguished General Schuyler, a man of extensive observation, of deep penetration and sound judgment, that the true character of a man or beast could be ascertained by looking at the parentage from which he had descended; and as an illustration of this, he used humorously to relate the incident, that in the early years of the

Dutch trade with the East Indies, one of his ancestors, being a sea captain, had gone thither, and returned with a wife—A Mongolian lady, whom he had married in his absence. And the blood of that cross continued still to cling to the descendants two centuries afterwards, despite of all their efforts to eradicate it—so that down to the present day, in one branch and another of the family, one of these confounded East Indians would occasionally be making his appearance' *Trans. N. Y. Ag. Soc.*]

*Jerked Beef.*—This is the name given to a plan of preserving meat, much in use in South America, and often practised in the frontier settlements of the United States and Canada, where salt is scarce. All the lean parts of the carcass of beef or venison are cut into fine shreds, and thoroughly dried in the sun; or if the weather proves bad sometimes by the fire and smoke. When well prepared they will keep sweet for years.



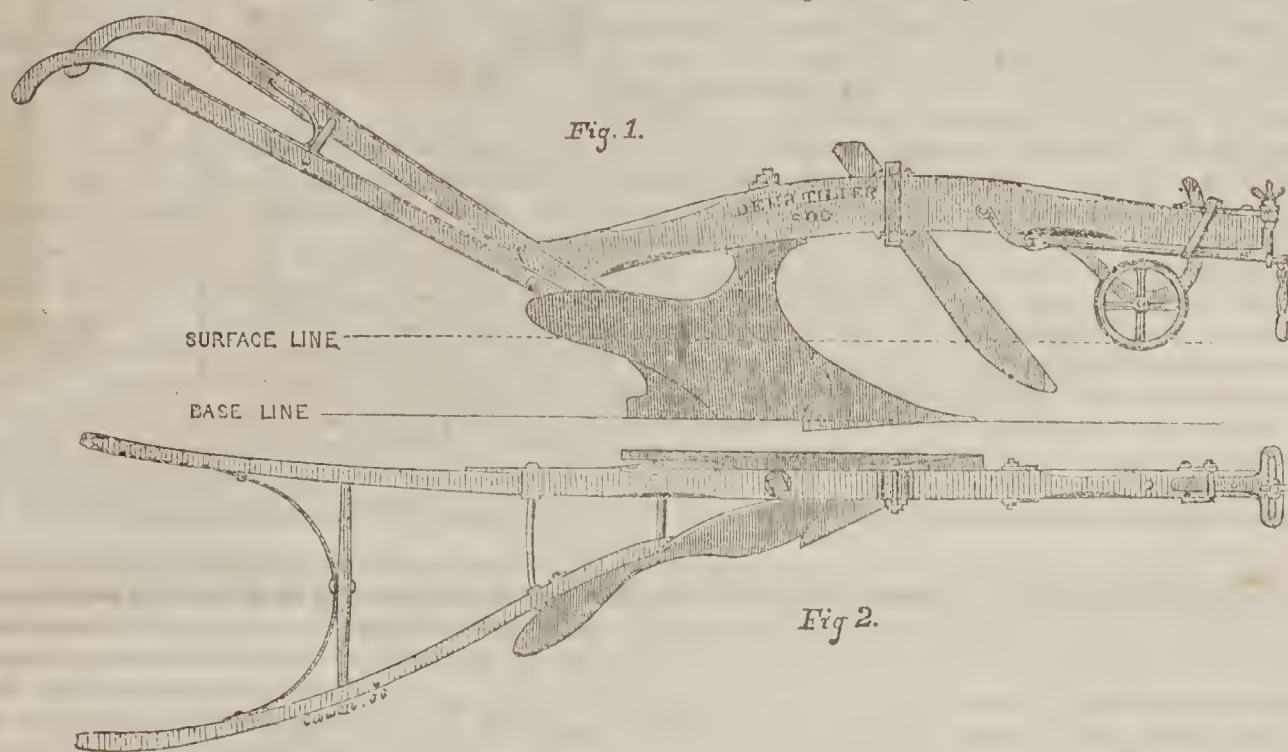
**Plows and Plowing.**

Of the plows here represented we have no practical knowledge, never having used them nor seen them in use. They seem to be constructed upon true and philosophical principles, and in some of the States of the North, where they have come rapidly into use, they are spoken of in very high terms. While we should take care not to be imposed upon by implements that are nothing but a humbug and a cheat, we should not be wise, from a fear of being deceived, in closing our eyes against the improvements of the day. It is economy to procure always the best tools for the workman, and the only question is, which are the best. To solve this is not so easy, but we must exercise an enlightened discrimination in the matter; we must open ourselves to the best sources of information, and act accordingly. Upon the whole, the Ruggles & Co's

series has favorably impressed us, and we intend to give it a trial. The cuts we have procured from A. B. Allen & Co., New York City (at whose establishment the plows are kept for sale), for the purpose of giving a view of the implement, and the best information regarding an instrument that has produced during the season a good deal of noise among the agriculturists of a large number of the States. The May number of the American Agriculturist says:

"Within the past ten years more has been done in the United States for the improvement of plows and plowing, than had been accomplished since the settlement of the country. Up to the year 1850, there were probably at least 200 different patterns of plows manufactured in this country, all of which have proved more or less useful for the particular purposes for which they were designed. A

gradual change, however, has latterly been taking place in plowing among our most enlightened and enterprising farmers; they have found it highly advantageous to deepen gradually the tith of their soil. For this purpose, they not only require the frequent use of the sub-soil plow, but a surface soil plow, also, which can turn up and thoroughly pulverise the earth deeper than any now in use. Two kinds of plows different from any yet manufactured, have been earnestly called for by the public for this purpose; one for turning a deep, flat furrow in a light soil, and another for turning a deep furrow in a stiff clay soil, at an angle of about 12°. To effect these purposes with any degree of perfection, the share, mould board, and wings of each required plow must differ materially from the other in width, rise, and turn. This great desideratum seems now to have



been accomplished, as our readers will learn by the following extracts which we take from an able article in the March number of that excellent periodical, the Albany Cultivator, written by Mr. F. Holbrook, an eminent practical and scientific farmer of Brattleborough, Vermont:—

"About a year ago, I called on Messrs. Ruggles, Nourse, Mason, & Co., and upon stating the difficulties I had experienced with my plows, they remarked that there was quite a growing demand for plows for deep work; and they at once evinced a most commendable readiness to undertake such a series of experiments, regardless of expense, as should enable them to supply, in the best manner, this demand of an advancing agriculture. They made a plow that gave me satisfaction, for it could turn a furrow a foot deep, and it did not choke under the beam. The making and trial of this plow suggested further improvements, and these in turn led to others.—The various experimental trials may be summarily stated as follows:—

1. To make a plow to turn furrows ten to twelve inches deep, and turn them without choking under the beam

2. To make a plow to turn deep furrows, requiring the least practical width in proportion to the depth of furrow.

3. To make a plow to turn deep narrow furrows, and to turn them on so easy a line of transit as to prevent breaks on the furrow slice.

4. To make a plow to turn deep narrow furrows on the easiest practicable twist, and to lighten the draught of the plow whenever it can be done without detriment to the best work.

5. To make a series of sizes of plows for turning flat furrows, seven, nine, and twelve inches deep, each plow proportionately combining the above specifications.

The experimental trials also led to the production of two sizes of plows for adhesive soils, laying lapped furrows at an angle of 45°; and two sizes of plows for turning stubble furrows.

Fig. 1, represents a furrow-side elevation of plow No. 72, or smallest size of the new flat-furrow plows, and fig. 2, a horizontal plan of the same. In considering the remarks I offered upon No. 73, for furrows nine inches deep, and plow No. 74, for furrows twelve inches, each possess the same general form and work-

ing properties of No. 72. They are each constructed upon the principles of an ingenious scale, the lines of which, as applied to the mould boards of three plows, and relatively the same.

Fig. 1, represents the handles as long and raking, which gives the plowman a powerful leverage, and an easy and accurate control of the implement; the beam is high, and arches well over the coulter, to permit loose grass or other loose matters to pass off; and the plow to swim clear; the coulter is consequently long, and is made wholly of steel, to give it the requisite stiffness; the wheel or roller is nine inches in diameter, to prevent laboring and creaking on the axis, and it is set under the beam, experiments the past summer indicating that a wheel on the side of the beam give the plow an unsteady movement; a wrench accompanies the plow, adapted to the adjustment of the coulter, roller, elevis, &c.; the draft rod is short, connecting with the beam forward of the coulter, in order to preserve the space under the beam in that region entire; the quadrant, or elevis, attached to the end of the beam, through the bolt of which the draft rod passes, is adapted to give the plow any



desired landing or earthing. The mould board is long, the line of transit over it for the furrow slice is easy, giving the slice a long, easy, and equal curvature throughout.

Fig. 2, shows the inclination of the land side, and the coulter has a corresponding inclination. Fig. 2 also shows the position of the beam over the body of the plow. The share and lower parts of the mould board are narrow, and the mould board is high, to adapt the plow to deep, narrow work. The share is long, with a raking cut, which gives it an easy entrance into the ground.

Fig. 3, represents pretty well the movement of a furrow slice seven inches deep and eleven inches wide, over the mould board of this plow, and its final position after leaving the plow. The easy transit and the easy flexure of the slice, are noticeable. By means of the inclined land side and coulter, the slice is cut off the land upon a bevel, which very much facilitates its dropping in snugly beside the previously turned slice. It will be observed that the width of cut made by the share is such as to leave a good hinge uncut, upon which the furrow holds its proper position at the bottom, while the top is describing a quarter of a circle to reach the perpendicular position, at which position the plow has ripped off the hinge. If the slice were cut entirely off by the share, it would be apt to push off at the bottom so far as to fail of being turned over to its proper position; in other words, a wider furrow would need be taken to turn well.

Fig. 4 shows that, theoretically, a furrow cut straight from the land will shut in beside the previously-turned furrow. The furrow slice, *c, d, e, f*, is cut straight down at *a, b*, and rising on the corner *e*, as a pivot, it describes a quarter circle, *b, d*, and then changing to *f*, as a pivot, it describes another quarter circle, *e, g*, and shuts in snugly beside the previous furrow, *g, h, i, k*. But in practice it is difficult to make the furrows do so; they are very apt to ride on the corners, as represented by Fig. 3. With an inclined land slide, and a bevel cut from the land, this practical difficulty is avoided.

Fig. 6 represents the movements of the furrow slice over an imperfect mould board. It will be observed that the plow is too wide on the bottom to take a narrow furrow, and if the attempt is made to turn an eleven-inch furrow, there is no hinge left for it to turn on. The mould board is so short, and wings over so excessively, that the furrow slice is cramped into an unnatural movement, and is badly broken. The plow is also too low every way for a seven inch furrow, and is completely buried. We find in practice that such plows can only be kept erect in furrows seven inches deep, by constant, laborious exertion on the part of the plowman; that they have a constant tendency to ride the furrow at the point where the mould board wings over so much; that the heel of the land side sole is lifted an inch or two from its proper level position in the furrow channel, and that the plow inclines very much to run on the point of the share.

[TO BE CONTINUED.]

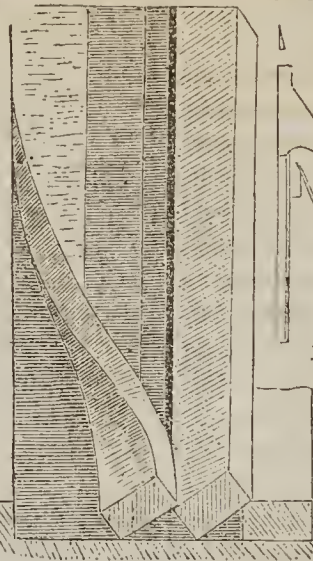


FIG. 5.

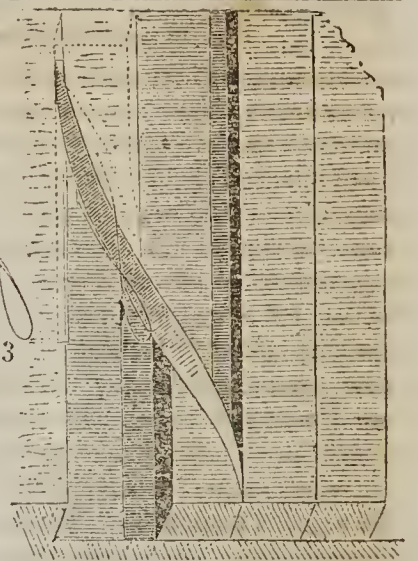
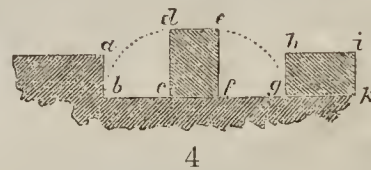
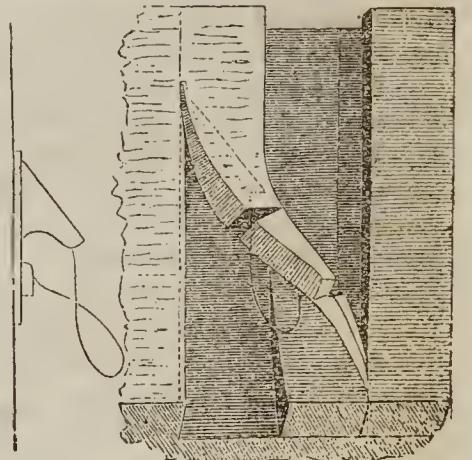


FIG. 3.



4



6

#### Cultivation of Indian Corn.

MESSRS. EDITORS:—A great deal is said in the Farmer and Planter, on corn planting, cotton planting and on improvement of land; on plowing in green crops, on resting land, rotation of crops, &c., all of which I am glad to see, with the plans of manuring lands with cotton seed, stable manure, guano, bone-dust, lime, gypsum, &c. I am pleased to see it all, I repeat, with the views of the different authors upon chemistry. If we had access to an abundance of these fertilizing materials, we might soon make our poor lands rich. These sometimes make me think of the little boy who saw the good bread and could not get it; but I think it will do some good if I do not get any of it, I like to know that some one gets it.

Planting and cultivating corn require some judgment as well as everything else, according to the situation of the land. If you want the best crop the land will make, break deep, plant early; and plow deep and regular while the corn is in the plant. After it begins to joint, if you still wish to cultivate clean and make as much as the land will make, plow shallow and with a great deal of caution, not to cut too many roots close to the corn, and continue plowing till the silk is dry on the shoot. If properly cultivated in this way you can obtain the best crop the land will bring. Late and careful tending will keep the corn green longer and mature it better.

When the shuck gets yellow the fodder ought to be taken, which will be good, and the corn ripe enough not to be injured by it. By the above process you will get the best crop of corn and fodder; but the land I think will be more injured than to plow deep, plant early, and tend early and deep, and when the corn is jointing, quit it clean. You will obtain a good crop of corn, your land will be covered with peavines and grass which will shade it through the months of July, August and September; next year it will bring just as good a crop, with all this combustible matter plowed in, as at first. The former plan of late culture will make the best crop and the poorest land in a short time; while the latter will make nearly as much, and the land will last twice as long—quality of the land and other circumstances considered. Let the shuck get yellow before taking the fodder, and you will not have light husky corn, and wish you had sown green corn for fodder. I have said nothing about planting distances, as that is to be governed entirely by the quality of the land, quality and quantity of manure, &c., applied.

The above is a small scratch of my opinion and experience; if the editor thinks fit he can put it in print, if not he can throw it under the table. I will give my views on all the above named articles in a short time, which I am willing to have treated in the same way.

Natural Grove, Sept. 1851.] A SUBSCRIBER.

#### The Yacht "America" vs. English Yacht Squadron.

IN our last issue we had the gratification to record the success of Mr. M'Cornick's reaping machine over all rivals at the London Fair.—Since, the transatlantic steamers have brought intelligence of the success of American plows in a trial against the world. Yet later, a third "purple patch" is added, the victory of the "America" over the English Yachts, and we again shout "Io triumphe," and all America may shout "Io triumphe."—Says a correspondent of the "Times" "the glory of the the Royal Yacht Squadron has departed from it, and

The gentlemen of England, who live at home at ease,  
And little heed what passes on the other side the seas,

have received a severe rebuke for not keeping their eyes wide open. We experience, ourselves, no inconsiderable amount of mortification in noting down the fact; but it is of no use to make wry faces."

The "America," built by Mr. Steers of New York, has met in a contest for speed the "crack" vessel of Great Britain, and utterly vanquished her as a rival. The discomfiture seems to have been overwhelming. The sensation produced by this result, so unexpected upon those in the habit of participating in the regatta, has been likened to the consternation which the sparrow-hawk strikes, when he darts on the wings of light-



ening among the flock of wood-pigeons. From the accounts that have come to hand, it has occurred to us, the scene was not unlike that of sorrow and grief, narrated in ancient verse, when it is said "all with one accord were silent, and fixed their attention on him (it) eagerly attentive; then," not "father Æneas," but John Bull "thus from his lofty couch began." "Unutterable woes," O, Steers, you force me to suffer; by showing how the Americans may "overturn the power and magnificence" of the Queen's navy and commerce, "and her deplorable realms." What, "cruel" Brother Jonathan, "in the very relation of such woes could refrain from tears?" No wonder, then, to use the words of their own reporter, "they stood petrified." Superiority in the models of vessels is of immense moment in commerce and in war. Like philosophers, however, they are healing their wounded pride with the only balm they have, that they contended like men of bold spirit, and defeat under such circumstances is less dishonor than a refusal to accept the challenge, or an absolute back-out.—Hereafter it is not improbable they may act upon the suggestion that it is better for them to lay aside the delusion that they are the best ship builders in the world, and taking the hint from the enemy, model after the Yankees, instead of persisting in the contempt they have hitherto had for everything from the "new world." A few more such manifestations as they have had lately, will have a tendency to satisfy the more sensible part of the English that their travellers in America, though they may be a distinguished Johnson, are either not disposed to do, or are incapable, from ignorance or prejudice, of doing justice to us in their reports at home. The following is from the London Times, and is, we think, an interesting account of the contest:

"All the people at Ryde seem to be labouring under a perpetual delusion that 'the Queen is coming;,' and even on Friday last the mania was as rife as ever, though it was known Her Majesty was engaged in giving the usual annual *fête* to the farmers' laborers and the crews of the yachts. For some reason or other, although there was a whole armada of yachts at Ryde on Friday, there was great difficulty in getting up a race. For the £50 cup for square-rigged yachts of the Royal Victoria Yacht Club, only two entries were made, so that the match could not come off, as the club requires three entries for each race. For the second race, prize £50 cup for cutters of 75 to 105 tons of the Royal Victoria Yacht Club, only the *Gondola* entered, an 87 ton cutter, which Mr. Woodhouse, the owner, is said to be desirous of running against the *America*; so there was no race.

At last three fore-and-aft schooners of the Royal Victoria Yacht Club—the *Fernande*, 126 tons, Major Martyn; *Anaconda*, 110 tons, Sir C. Ibbetsen, *Bianca*, 31 tons, Mr. Webster, (the *Fernande*, it will be seen, is one of the competitors with the *America* for the Royal Yacht Society, £100 cup on Friday next) entered.—The *Bianca* declined the contest before the race was half over, and the match

was left between the other two, the *Anaconda* proving the better boat in such weather as there was, and finishing the course, which was twice round from the starting vessel off Ryde pier to the Brambles round the Calshot light-vessel, and then round the Nab in advance of the *Fernande*. The event of the day, however, was the appearance of the Yankee. I suppose she was tempted out by the breeze of wind, which was not, however, quite good for six knots, by the sailing of several crack schooners from Cowes, and by the desire to run past Osborne decorated for the *fête*, and with the Royal yachts lying dressed in the roads, close under the house, so that the Queen might see what a craft brother Johnathan could turn out. Whatever the reason, out she came, with the wind on her quarter, (after three or four schooners had got well ahead of her,) under mainsail, foresail, and the new jib. She went along very steadily and well up to Ryde, but did not show any great superiority till she was off the pier, about 3.20, when she seemed as if she had put a screw into her stern, hoisted her fore-and-aft topsail, and began to "fly" through the water.—She passed schooners and cutters one after the other, just as a Derby winner passes the "rack," and as the breeze freshened, slid with the speed of an arrow out towards the Nab, standing upright as a ramrod under her canvass, while the schooners were staggering under every stitch they could set, and the cutters were heeling over and under gaff topsails and balloon jibs. It was remarked by the crowd on the pier-head that there was scarcely any foam at her bows, nor any broken water raised in a mass before them: but that the waves appeared to fall away under her keel and sides, offering the *minimum* of resistance to her course, owing to the peculiar form of her "entry." Still, the nautical looked knowing, and said, "Oh, ay, this is all very well for a schooner under this wind—let us see how she'll come back, when the wind will be a point or so worse for her!" The *America* soon gave them an opportunity of judging on this point too. She went about in splendid style, a little short of the Nab, spinning around like a top, and came howling away towards Cowes as fast if not faster than ever.—As if to let our best craft see that she did not care about them, the *America* went up to each in succession, ran to leeward of every one of them as close as she could, and shot before them in succession, coming to anchor off Ryde at least two miles, as it seemed to me, ahead of any of the craft she had been running against. Having landed the Messrs. Stephens for the ball at the club-house, made sail in the evening for Cowes, and bowled away like a sea-gull, leaving all the boatmen and yachtsmen with a deep sense that she was a "tartar," the former, in particular, being duly offended with the liberal display of stars and stripes on her ensign and burgee on such a crack craft, and irritated with "the gentlemen" for not accepting her challenge. Indeed, I hear one liberal offer

was made by a boatman on behalf of his mates, to man a crack cutter if "the gentlemen" would risk their money, run the Yankee to Cape Clear and back, the worse the weather the better, and "crack on till the masts went to —." The proposition was not acceded to, greatly to the disgust of these naval Curth.

From the same correspondent, under date of Cowes, afternoon of the 21st, is the following interesting account:—Eus.

The challenge of the Americans has at last been accepted, Mr. Stephenson, M. P. has taken up their gage, and all that remains is to sail the match as soon as the regatta to-morrow is over. The conditions of the race are not known, but the sum staked on the event by Mr. Stephenson is £100. The vessel which is opposed to the *America* is an iron schooner of 109 tons, called the *Titania*. She was built by Messrs. Robinson & Russell, and is said to be a fast vessel in smooth water; but I must confess I share in the doubts expressed by most people here as to her being a fit rival for the *America*, and am inclined to think she will be beaten hand over hand, notwithstanding the high reputation of her builders. However, Mr. Stephenson will have the credit of taking up a challenge which could not have been permitted to lie before us much longer without some degree of discredit being attached to the spirit of our yachtsmen, which hitherto has been unquestioned. If he win, the *America* may pull down her stars and stripes as soon as she likes. If he be beaten, it will only be after a good race; and no one can say that he did not do his best for the honor of the country, and that he did not lose £100 with a becoming grace *honoris causa*. It is a characteristic trait that the Hon. member puts his trust in iron, but wonderful as are the capabilities of that universal metal it is to be proved that it is a better material than wood for the hulls of yachts.

\* \* \* \* \*

The club-house is crammed with members, and altogether there is more excitement than is usually visible on such occasions among the easy-going yachtsmen. It does one's heart good to see the Marquis of Anglesea as full of life and fire as in his best days, with a jaunty tarpaulin hat on his head, a pair of flowing canvas trousers, and a dapper little blue jacket, walking about in front of the club, with a hearty shake of the hand for all his friends, and a word for all around, and then getting into his own boat with a stout stiff stride, as though he had never left a leg behind at Waterloo. But that the old Pearl had no chance, I am certain that the Marquis would not have allowed the Americans to have it to say that it was six weeks before any Englishman took up their challenge. Lord Jersey and a number of other members of both Houses are also here, looking much better, but very different as regards the outward man, from what they were a few weeks ago in London. About 1 o'clock a fillip was given to the saunterers and idlers, by the *America* showing signs that



she was getting under weigh. She hoisted her mainsail, then her fore and aft foresail, and when her prodigious foresail was up and filled, shot from her moorings like an arrow towards the Needles, greatly to the discomfiture of a little fleet of artists around, who were busily engaged in taking her portrait. I had a good opportunity of seeing how she was handled, as I was close alongside at the time, and I must say that, though her men were smart, in that respect we have nothing to fear from her, the start being made in a fair average way. This is no criterion, to be sure, of what she can do, as there was no occasion for haste, the Commodore merely wishing to have a sail in her; but it did not strike me that the crew, undoubtedly fine, able bodied young men, were at all superior to our ordinary sailors. Her exterior is so finely smoothed—I might say polished—that it is difficult to believe, till you touch her sides, that she is not made of iron, and I again observed the curious way in which the water fizzed up from her bows—it was not raised up in foam breaking away from the prow as with our cutters, but started up in thin little jets, and fell away under the bows just in the same way that water spurts up before a knife blade moved rapidly through it. Another peculiarity, and one which I think it would be well if our yachtmen copied, is that her sails are laced to the booms and masts, so that not the slightest particle of wind can escape the sails. Long as her masts seem, she stands remarkably well under canvas. Judging from her course to-day, she steers easily and is very manageable. With all sail set she is not so handsome to our eyes as our own craft, mainly on account of the cut of her main and fore and aft foresails, which are more in the shape of lengthened, obtuse-angled parallelograms than our own, and have not near so great a difference between the length at the boom and at the gaff.

Just as I am writing this the people are running down to the piers and to the beach. It is nearly 3 o'clock, and the *America* is sailing back from the Needles, past Cowes, with a flotilla of yachts around her. She has foresail, and mainsail and fore and aft foresail set (her new jib not being used,) and goes almost as softly, lightly, and quickly through the sea as a swallow skims over a meadow. About twenty cutters, schooners, and yauls are after her, most of them with every sail they can set, but she shoots away from them with the greatest ease. Several yachts which have been cruising about alter their course, and drop in before her, but the *America* gains on the best of them as if they were not moving at all, and before she had passed the point which shuts out my view of the Solent, just off the entrance to Cowes from the Portsmouth side, she had left them all hopelessly in the rear, the work of about ten minutes.

From a different writer we have the following items of the match race of the *America* and the *Titania*:

In reply to the proposition made by Commodore Stephens, Mr. Stephenson agrees to sail his schooner yacht, *Titania* against the New York yacht, *America*, for the sum of 100*l.* each. The course to be from the Nab Light twenty miles off.—Vessels having run or turned to windward, as the ease may be, from the starting point to the station vessel, that point of superiority will be decided, and 50*l.* awarded. The Commodore, Lord Wilton, will then start the yachts again to return to the Nab, when the other point of sailing and the remaining portion of the stakes will be awarded.—The stakes, before starting, to be lodged with the Earl of Wilton.—It is the wish of the owner of the two vessels that the Earl of Wilton's decision shall be final.—The Earl of Wilton will start the vessels on the earliest day after———he considers suitable for the purpose.

R. Y. S. Club-house, Aug. 19. 1851.

Of the match open to vessels of all nations, sailed around the Isle of Wight, on the 22*nd.* ult., the following is a brief report.

COWES. Friday—10½ P. M.

The 100*l.* cup, for all nations, was run for to-day, and after a most exciting contest, was won by the *America*, which beat her competitors with the greatest ease. The day was fine, and at starting there was not much wind.—Eighteen vessels entered for the cruise, and went off beautifully at 10 o'clock. At the Nab the *America* shot ahead and at the Needles was seven or eight miles ahead of the nearest yacht. She carried away her jib-beom.

The *Arrow* ran ashore at Ventnor.—There were no other casualties, though it blew freshly from S. S. W. outside.—Many of the yachts have not yet returned.

The Queen went off to the Needles to see the race, and the Royal yacht ran part of the way home with the *America*. She rounded the Needles at eight minutes to 6 o'clock, after which the wind died away, and the rest of the match was a drifting race. The *America* was loudly cheered by all ashore and afloat.

The *America* arrived at the starting vessel at 8-35, P. M.; the *Aurora*, a 47 tons cutter, Mr. T. Le Marehant, at 8-55.

#### To the Cotton Planters of the United States

HAVING been connected with the Cotton interest since I was twenty years of age, now forty seven years ago, either as purchaser, factor or planter, and in all these capacities, I feel more freedom in addressing you, than I should as a man less identified with you, in promoting the general welfare of *all* in this great national staple, by which the whole world is so generally benefitted. My object in making this communication is, for the purpose of showing how much injury you sustain by the course which is pursued by too many, and how much you might remedy the great fluctuations in the price which you have to contend with, by adopting a different one. Cotton,

next to public stocks, has become a national object, and like that of stocks, is as much controlled by public opinion.

Cotton is not only a national object with the U. States, as the means of paying for most of our importations of foreign merchandise, and the interest on our public debt to foreign holders, but is a national object to Great Britain, in supplying her immense body of operatives with constant occupation, who could not find the means of support, without American Cotton; and also furnishing full employment for the almost incalculable amount of capital, invested in her towns and villages throughout the Kingdom, in machinery, manufactories and buildings, as well as an immense amount of shipping, without which they could not be sustained, and their present value, vast as it is, would be almost annihilated. It is also becoming a national object with France, and more or less so with other portions of the continent of Europe; for that portion of the world, say France, Spain, Belgium, Holland, Russia, and other countries on the continent, are now supposed to consume about eight hundred thousand bales of American Cotton, and when we take into view the cheapness with which this precious article of Cotton furnishes clothing to the poorer as well as the higher or richer classes of their population, and how immensely the value of the article enhances by the labor they bestow upon it, in manufacturing, may we not consider it a national object to nearly all Europe? And of how inestimable a value is it to New England, New York, and other portions of this Union, in furnishing a profitable employment for the capital invested for the manufacture, and to other ships and seamen, as well as operatives? And is it not capital itself, which is furnished to all these countries before named? I think, as I believe every one will think who investigates the subject, that it is a capital to its extent, furnished them, for without this same American Cotton, all their investments before named would be nearly annihilated, and what would become of their poor operatives, and where would their vast tonnage of shipping find employment? We are in the habit of thinking and saying that Great Britain furnishes us with capital, when we draw bills upon our shipments of Cotton; what a mistake is this, for we actually furnish her with capital, by giving her the Cotton we ship, of three months credit, no matter who ships it, and draws the bills she obtains the credit, on every bale of cotton shipped to her ports, of three months at least, the average on which the bills mature from the time of their being drawn. And what cheap capital do we furnish those countries we have named, who manufacture it? from a pound of Cotton costing say 8 or 10 cents, they bestow labor upon it, and return it to us, to the extent we consume of their fabrics, at an average of 50 cents to one dollar in the shape of goods per pound. What a precious capital then, must this be, which withdraws from us our wealth at such a rapid rate, with



such fearful disparity between the price we sell at and that at which we purchase when it returns to us; and yet we are the advocates of free trade. Free trade! Is it not a mockery to ourselves to call *this free trade*, a reciprocal one between us and them? One that enriches them and impoverishes us! But in regard to Cotton, you see by the extraordinary decline in this great staple, so necessary to the comfort and happiness of mankind, how much public opinion has to do with it; for it has been recently like a great ball, to which every one has been disposed to apply his foot and help it down as fast as possible. Newspapers and letter writers have all afforded a helping hand to produce this rapid decline in cotton. The planters themselves have been hurrying their cotton to market, as if their lives depended on its immediate sale. What folly to force the article on the market so much faster than it is wanted! There is no just or reasonable occasion for this unprecedented decline in the price of cotton.

There is no more than is wanted for the consumption of the world at present, though it has been more largely shipped to Liverpool during the last season than the immediate demand required, in consequence of our own or Eastern manufacturers having partially suspended their works; but there is really no more cotton in Great Britain than will keep their stock at a medium standard of supply during the year, considering the present consumption and export demand; indeed it is quite apparent that the stock in England on the first of January next will be even less than that on the first of January, 1851; and yet the price is  $2\frac{1}{2}$  to  $2\frac{3}{4}$  per pound less now than it was in August last in Liverpool; a difference of fully five cents a pound less!! Why is this, when the stock in the United States is fully 50,000 bales less, and our American factories hold less by more than 50,000 bales making a difference in the United States of over 100,000 bales, which deducted from the stock in Liverpool, will make it about the same it was last year at this period. Our manufacturers must be supplied soon—consequently they will be in the early fall market. There will be much less cotton shipped to England, it is believed, the next five months of last year—say from August 1st, 1852—because the manufacturers of the United States will require much more than last year during that period. But you, as planters, pursue the most suicidal policy; when your crops look a little promising, you report the prospect of the greatest yield ever known, even before a boll is matured. When you have a bloom a little earlier than your neighbor, or a boll of cotton open a week earlier than common, although of forced or premature growth, by reason of the remarkably hot and dry summer, it is trumpeted forth in half the newspapers in the country as something extraordinary; and instead of keeping your few bales of cotton which you may gather in August, until after the 1st September, to prevent injury to prices in heralding by

telegraph the arrival of new cotton, you strive to be first in market, even by sending a half bale (the first new cotton bale weighed 187 pounds, the usual weight of a bale is 450 pounds,) to market. This is all wrong; the planter should avoid every thing calculated to convey the idea of a very early or large supply of cotton, as it is seized upon with the greatest avidity by the consumers to depress prices, which are always much easier to get down than to get up. The remedy, the planters have in their own hands.—We all know that two millions of bales of cotton will produce more money to the United States than three millions, owing to the great difference in the price which the former will command over the latter. Planters knowing how easily and to what extent prices are affected by an over supply, should, when that is the case, keep at home one-fourth or one-third of their respective crops, which would correct the evil. The better remedy, however, would be, to plant less cotton, and raise more corn, oats, hay, potatoes, peas, mules, sheep and hogs; make more of articles for home use, and buy less. By this course they could as well always have 10 or 12 cents per pound for their cotton, as 6 or 7. The cotton crop is attended with much hazard and uncertainty, and the labor of saving it very great, while the hands are much exposed to sickness and death, during the hot months of the picking season. Let the cotton spinners in the shade come in the months of August and September, and see our negroes toiling in the dews of the morning, drenched with wet, and at mid-day broiling in the sun, and then say if the planter is too well paid at 10 and 12 cents for his cotton. So long as planters strive to make so much more cotton than is wanted, strive to hurry a few bales to market earlier than his neighbor; talk very loudly of their growing crop, and publish in the newspapers the first blossom or the first boll of cotton open, with a view of precedence of their neighbors, so long, except in very short crop years, they must expect ruinously low prices; for the spinner will, instead of encouraging the grower to make a full supply, always take advantage of a little larger stock, or a little favorable prospect in the growing crop, to depress prices all he can, previously to laying in a supply, when he makes large contracts for goods and yarns—then he is ready for a rise in cotton, should it come, and he realizes enormous prices on his manufactures.—Will the cotton planter never learn to be wise, and only supply the demand.—There will be just as much cotton consumed at 10 cents as at 6 cents, while breadstuffs and provisions and money continue so plentiful, and the working classes so comfortable as they are at present in England and on the continent of Europe.

Let the planters see the result of their own folly in picking out every boll and half boll of imperfect and worthless cotton during the most extraordinary long and fine season of last autumn. By saving about 200,000 bales of the most in-

ferior trash, (owing to the high price) among which were thousands and tens of thousands of unmerchantable "*dog tails*" as they are called, gin motes or falls, and seeds of no value whatever, but all served to swell the list of receipts at the ports. This I have myself witnessed at your gin houses and on the factors' tables in New Orleans. These 200,000 bales, had they burned at your plantations, or suffered to rot in your fields, would have made a difference in the actual amount of money received for your late crop, say about half, or 1,100,000 bales, of three cents if not more, per pound, or  $13\frac{1}{2}$  dollars per bale, equal to 14,850,000!! which you have given to the *spinner Princes* of England, by your unwise course in saving the worthless trash—besides influencing the coming crop to your future loss of about 33,000,000 more, being the difference between 10 cents per pound and 7 cents, the probable coming price, say on 2,500,000 bales, which I presume the crop may be, but not more—all this you have a prospect of losing by your suicidal course in saving every worthless boll of cotton last fall, and by your extravagant and untrue reports of the coming crop. These are startling facts, but nevertheless too true.

A VETERAN FARMER & PLANTER.

N. O. Bulletin.]

*Pine Straw Braid*—The straw of the long-leaved pine has been found to possess superior qualities for braiding. It is prepared from green leaves, scalded and dried in the shade, similar to the preparation given to straw of grain, and possesses a great degree of toughness, and is very even and sufficiently long. The braid work we have seen was a delicate light-green color. Whether it will bleach white, we are not informed.

*Farmers' Rice Pudding*—No. 1.—Take two and a half ounces of rice, five and a half pints of milk, and four ounces of brown sugar, grate nutmeg over them and bake in a deep pan, three hours stirring well every 20 minutes, previous to baking.

No. 2.—To half an ounce of rice put a pint of milk, and sweeten to taste; otherwise, same as No 1. Eat cold.

A. D.

Agriculturist.]

#### Soils and Manures for Fruit Trees.

FRESH, virgin soil will seldom require manure. A stiff clay may need sand or crushed charcoal, unless when timber has been burnt off. Thin sandy land, without a subsoil of clay, though new, will be greatly benefitted by a dressing of clay, swamp muck, lime, ashes or bones. A deep rich soil, or one which is low and inclined to wet, or has had a heavy growth of cane burnt on it, the trees had best be planted on the surface, and have a small mound made over the roots; which will have the effect of checking a too rapid growth. All low and wet land must be as thoroughly drained as the case will admit of, before planting.

Worn hill-lands require manuring and



thorough breaking up, to the depth of six or eight inches. It is more than doubtful, if benefit is derived from any extra deepening of the soil, in stiff lands or on a retentive subsoil, by *trenching* or *subsoiling*—unless the deepening has been preceded by *under-draining*. A deep, loose bed formed in the clay subsoil, retains much more water than would naturally and properly be held in suspension.—Hence it is injurious to dig a deep hole, in such a soil and subsoil, in which to plant a tree. Better be content with a gradual deepening, where more than the surface soil is embraced; keeping that enriched by annual surface manurings.—Where the subsoil is of a porous character—but not pure sand or gravel—the subsoil-plow may be used to advantage; a strong bull-tongue plow, drawn by two yoke of cattle in the furrow made by the surface plow, is a good substitute.

Fresh stable manure is unfit for fruit trees. It is good when partially decayed. Alone, however, it is insufficient.—Different trees and plants require different elements of support. Composts, the basis of which is peat, are highly recommended. They are unquestionably excellent. We have no peat in the south; but abundance of that which answers a fully better purpose—swamp muck, and inexhaustible supplies of leaf mould in the deep hollows of the woods. Along the sea-coast, and that too where such material is most needed, there are immense quantities of marsh mud and peaty matter, produced from the partial decay of the rank growth of the marsh grass, for ages.

Such material must be dug out and made into oblong beds, with alternate layers of half an inch to one inch of ashes, and a foot of mud; or, near the sea-coast, substituting oyster-shell lime, burnt on a log-heap so as to include a share of ashes, and slaking the shells on the mud-heap, by sprinkling over them salt water; carefully turning and mixing after the heap has lain a month.

For the apple, no better compost could be found, adding to every cart load, a bushel of lime when ashes alone were used. For the pear, add a bushel of broken bones and a bushel of ashes to every cart load of the compost. For the plum, add to the cart load—if no lime or salt was before added—half a bushel of lime and a peck of salt. For the grape-vine, half a bushel of plaster. For the peach, nectarine and cherry, add to every cart load of the compost, a bushel of fresh, or two bushel of leached ashes.—For the fig and the orange, a bushel of broken bones and two of crushed charcoal. These last, the bones and charcoal, are excellent additions for all fruit trees. For the plum, in sandy land, with each load of the compost should be mixed an equal quantity of strong loam or clay.

On the sea-coast, supplies of fish and of sea-weed can occasionally be had, and are an admirable addition to the compost heap—care being used that there is none of that ruinous pest, *Bitter Coco*, in the sea-weed. Cotton seed which has

been composted two or three months, is one of the best of all manures for the orchard.—*Affleck's Southern Rural Almanac*.

#### Drilling in Wheat.

As the time will soon arrive for farmers to decide on the mode of seeding their fall grain, and, if to be drilled, to supply themselves with a good drill, I hasten to give the notice I promised you on the experiment I made last fall, with "Pierson's Drill," which I obtained of Ezra Whitman, Jr., and as your columns may be crowded, I will be very brief at present, and give you a more extended notice after I have finished threshing my grain.

I seeded 55 acres in wheat, in St. Mary's Co., Md., with the drill, under the direction of a good practical farmer, from the 15th of Sept. to the last of Oct., the early seeding was best,) the most of which was seeded on wheat stubble, fallowed and plowed with a one-horse plow the same way; some drilled across the plowing and some lengthwise. It was not found necessary to harrow before drilling.

Three acres were not fallowed until late in September, when a growth of weeds was turned in which was three feet high, and drilled after a shallow plowing. The rest was drilled corn land; the corn was cut off, and the land plowed with a one-horse plow and the wheat drilled without any further preparation. The drill worked delightful on all, except the three acres referred to, and on that the wheat was well drilled, but with some extra labor in keeping the tines clean. We drilled  $1\frac{1}{4}$  bushels Mediterranean wheat per acre, and it was sufficiently thick, and  $1\frac{1}{2}$  bushels of Etrurian wheat, which was too thin; both came up regular and stood the winter better than plowed-in wheat. The too lots of Mediterranean are now thrashed—one of 26 acres yielded over 18 bushels per acre (the best sample I have seen this year)—the other of 9 acres yielded nearly 21 bushels per acre, which was a good yield, considering it was in a neighborhood where the rust has very seriously injured the wheat crop, and I think the yield must have been increased from 2 to 4 bushels per acre by the use of the drill, with a saving of one-third of a bushel of seed per acre. I am so well satisfied that there is a gain of the cost of the drill (\$100) for every 100 acres of wheat drilled on good, fair land, that I would not be deprived of the use of one if it cost me that amount, but from my present knowledge, I would think that the use of a drill will not cost (interest included) over twenty cents per acre.

*American Farmer.*] R. N. MILBURN.

#### Book Farming and its Value.

MESSRS. EDITORS:—In various conversations held with practical Farmers of this country, I have understood them to say that, while they regarded ashes as a good manure for any kind of a crop, it is especially so for the sweet Potato.—Indeed, if the marshals, when taking the census of these upper districts, had asked this question

in every farm-house: "What do you consider the best application for the sweet Potato?" the answer of every one observant of matters of this kind, would have been, "that ashes was about the best manure to ensure a Potato crop." Taking it for granted that I am correct in my premises, I think it can be satisfactorily shown, that Book Farming is not the "nonsense" it is deemed to be, by many Planters and Farmers scattered throughout our land.

In the year 1844, the Black Oak Agricultural Society, of South Carolina, with a highly commendable liberality employed that distinguished chemist, Professor C. W. Shepard, of the Charleston medical college to make an analysis of several of our staple products—Cotton wool, Cotton seed, Indian Corn and Sweet Potato. In the Southern Agriculturist for June, 1844, we have the analysis. That of the Sweet Potato is as follows:

100 parts of the undried Potato gave 1.09 parts, or rather, over one per cent. of a whitish ash, stained in points of a greenish color. Its composition is as follows:

Carb. pot. (pearlash) with traces of soda	60.00
Phos. of Lime (bone earth)	14.57
Phosphate Magnesia	5.60
Carbonate of Lime	5.37
Carbonate of Magnesia	3.80
Chloride of Potassium	4.10
Sulphate of Potassa	4.35
Silica	70
Chloride Calcium, Sul. Magnesia and Lime,	
Alumina and Oxides	99
	100.00

From the foregoing analysis, it appears that 60 per cent., or more than one half of the ash of the Potato consists of Carbonate of Potash, or, in other words, of Pearlash—the very ingredient which is extracted by all our housekeepers from ashes—the chief ingredient, in fact, of the ley employed so universally for washing clothes and making soap. Here, then, was an instance of Book farming—here was a man who had never grown a potato—yet while seated in his laboratory in Charleston, was able to say, as well as any farmer in the land, that ashes constituted the very best manure for the sweet potato—that for this particular crop, unleached ashes are far more valuable than those which have been leached.

But there is one thing more to which I would call the attention of the reader. The analysis shows that over 14 per cent. of the ash of the Sweet potato consists of the phosphate of lime, the material of which the bones of all animals are formed; so that 75 per cent of the entire ash of the sweet Potato is made up of carbonate of potash and phosphate of lime. Now it is a well known fact, that sound unleached ashes contain a notable quantity of these two very important elements, and to show this I annex the analysis of the ash of oak by Sprengel a distinguished German chemist.

100 parts of the ash of the oak consist of the following elements:

Silica	29.95
Alumina	8.14
Oxide of Iron	
Oxide of Magnesia	
Lime	17.38
Magnesia	1.44
Potash	16.20
Soda	6.37



Sulphuric acid .....	3.36
Phosphoric acid .....	1.92
Chlorine .....	2.41
Carbonic acid .....	15.47

100.

Now if the reader will compare this analysis with that of the potato, he will perceive that every incombustible element—that every salt needed for the growth of the potato, is either found in the ash of the oak; or may be formed from the elements existing there.

This analysis, it seems to me, is a palpable instance of the value of book farming. If we apply to the farmer and ask if ashes be good manure for the sweet potato, his answer is, "yes;" but if you proceed a step farther, and ask whether there is any marked difference between the effects of leached and unleached ashes, in a large majority of cases the answer would be vague—"he had not noticed particularly"—his "experiment had not been sufficiently exact to determine that point." If in turn we apply to the chemist and make the same enquiry, he answers at once—"ashes are the very best manure for the sweet potato"—we are told besides, that the potato requires a large amount of pearlash, and as leaching deprives ashes of this very ingredient, for this particular crop, unleached ashes are far more valuable than those which have been leached. The teachings of the chemist enable the farmer to realize the importance of sheltering from the weather all ashes destined for this crop; and he is also taught that if soap suds be thrown on a heap of leaves or mould, they convert them into a manure peculiarly favorable to the growth of this valuable root. Instead of vague generalities, the chemist gives exact analyses, and specific information, together with the "why" and the "wherefore." Now if all this be true with what semblance of truth can any one pretend to say that book farming is of no practical value.

In the summer of 1850, one of the most intelligent and successful planters of Abbeville, passed a few weeks in this neighborhood. While here, he gave it as his opinion, founded on actual experiment, that cotton might be planted in succession for many years on the same land, and without material diminution of crop, provided the land did not wash, and provided the stems, and limbs, together with all the seed, were annually returned to the soil upon which they had grown. Coming from the source this did I regarded it as a highly interesting and valuable opinion and one which ought to be extensively known. (I wish that I were at liberty to give the gentleman's name, as it would add much authority to what I am saying wherever he is known.) But without knowing anything of the facts, I feel confident of this, that if the gentleman referred to had not have been a Book Farmer, or in other words, if he had not have been familiar with the analyses of the cotton wool and the cotton seed, he never would have arrived at such an important conclusion. That the reader may decide for himself, I annex analysis of the cotton wool and the cotton seed, by Prof. Shepard:

100 parts by weight of the cotton wool being

burnt "secundum artem," left an almost purely white ash, whose weight was rather under 1 per cent., or 0.9247. Deducting the sand from the ash, the composition is as follows:

Carbonate of Potassa with possible traces of Soda.....	44.19
Phos. of lime, with traces of Magnesia....	25.44
Carbonate of lime.....	8.87
Carbonate of magnesia.....	6.85
Silica.....	4.12
Alumina, probably accidental.....	1.40
Sulphate of potassa chloride of potassium.....	} and loss 6.33
Chloride of magnesia, sulphate of lime.....	
Phosphate of Potassa—oxide of Iron.....	

100.

The analysis of the cotton seed is as follows:

"100 parts heated as above lost 77.475, and the thoroughly charred residuum burned under the muffle left 3.856 parts of a perfectly white ash. The composition was found to be as follows:	
Phosphate of lime with traces of magnesia	61.65
Phos. of potassa with traces of soda.....	31.51
Sulphate of Potassa.....	2.55
Silica.....	1.71
Carbonate of lime.....	0.51
Carbonate of Magnesia.....	.26
Chloride of potassium.....	.25
Carb. of potassa, sulphate of lime	} and loss 0.41
Sulphate magnesia, alumina, oxides &c.	

100.

The Professor adds: "The ash of the cotton seed is *fourfold* that of the fibre."

If these analyses and these statements be correct, we see at once the data for the opinion given above. Nothing need be said of the stems, limbs, and leaves of the cotton, as they remain where they grew—but if, in addition to these, all the cotton seed be returned to the land from which it was taken, it is manifest that four-fifths of all the mineral element abstracted by this great market crop may be restored to the soil. If the average product of our land be 100 pounds clean cotton per acre—if the ash of the said 100 pounds be but one pound, we can readily comprehend how so small a quantity of mineral matter per acre may be furnished by the disintegration of the soil—and for a series of years without any material exhaustion.

If, by the process stated above, cotton can be continued on the same land for a succession of years, without material diminution, it places it on a vantage ground scarcely possessed by any other crop. In Maryland and Virginia, they export their hay, Indian corn, wheat and oats, and by this process their farms are deprived of salts and minerals of inestimable value. To supply the deficit, they import by a voyage of ten thousand miles, and at great cost, the Peruvian guano, and apply it to the soil. The Southern Planter is furnished on his own farm in the *residuum* of his cash crop, with a domestic guano, easy of transportation and easy of application, which enables him to continue his staple crop on the same land, and for a series of years, without material diminution of product. "THE OLD FARMER."

Pendleton, S. C., Oct. 10, 1850.

#### EDITORS' TABLE.

##### De Bow's Review.

The September number of this periodical is even more interesting than usual. The leader is an elaborate article to show the practicability of establishing and sustaining a line of steamers from the United States to the Mediterranean. It argues that immense quantities of pro-

visions might be sent from the United States to the commercial companies of Europe with advantage, and the certainty and regularity of this passage would give a monopoly of freight to the steamers. The quickness of the trip would greatly multiply the importation of fruits, particularly those of a perishable nature, and thereby cheapen them and increase the consumption. The other sources looked to for support are of course passengers and letters. It is an agreeable enterprise to contemplate, but whether practicable or not remains to be seen.—Historical, statistical, and agricultural scraps of Mississippi, Louisiana, and Missouri, and the physical character of the "Interior of North America" occupy some fifty-five pages of the review.—The last was more particularly entertaining to us. Under the head of the department of agriculture is a paper upon the product of turpentine at the South, a very lucrative business—none more so. Next is the "History and Cultivation of rice," taken from the Farmer & Planter, an evidence of the discrimination of the editor, for there have been few, if any, better papers published upon the culture of rice. It was the design of the writer to add an appendix on the habits of the rice bird, as they are such certain and invariable depredators that their habits are as much the study of the rice planter as the time of putting on and taking off the water.—Said a gentleman to us recently, "if I were to lose my almanac and all knowledge of time, I could tell the month and within a day of the month by the visit of the rice bird upon my plantation on ——— river. If a rain should fall on the 17th of April, I would stake my life, the rice bird would appear on the morning of the 18th." We have a renewed promise of this appendix.

Next in order of progression is cotton and its prospects, a paper that we shall certainly transfer to our columns. There are other subjects of interest treated very cleverly.

SUBSCRIPTION.—We again express the hope that subscribers in arrears will remit us what is due. It is only by the receipt of the dollar that we can know whether we get any remuneration for our services, or whether the publishing of the paper is a privilege for which we pay money out of our own pockets.

SOUTHERN RIGHTS ADVOCATE, a new paper out of the ashes of the *Pendleton Messenger*, is issued at Anderson Court House. It is a handsome sheet, as everything is that comes out of the hands of Mr. THOMPSON, the foreman.

JACKSONVILLE REPUBLICAN.—This is received and we place it on our exchange list with pleasure.



**WESTERN HORTICULTURIST.**—This paper maintains its excellence and is about to enter upon its second volume.

**THE JOURNAL OF AGRICULTURE.**—We see this periodical highly spoken of and should be pleased with an exchange. The name of J. J. MAPES, one of the editors, is a sufficient guaranty of the ability with which it is conducted.

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#### YELLOW CLOVER.

**T**HE subscriber takes this method to inform persons at a distance, that he has been sending these seed by letter, and will be pleased to send them to any part of the United States, at one dollar per ounce (clean seed).

He can send from one to five ounces very safely by mail, and has done so repeatedly without any having miscarried.



Persons wishing seed will please address him by letter, post paid, to FORTLAND, Green county, Alabama, and their orders will be promptly attended to.

H. L. KENNON.

August 5th 1851.

9-1f.

#### Land for Sale in Pickens District.

 **T**HE Subscriber offers for Sale the Tract of Land on which he  now resides, lying in the fork of Seneca and Tugaloo rivers, on the main road from Pendleton to Carnsville, and twelve miles from the former place, containing nine hundred (900) acres; about one hundred (100) of which is Beaverdam Bottom. The place has on it a large and comfortable Dwelling House, a good Kitchen, and all other necessary out buildings. The site is a beautiful one, the water fine, and the place as healthy as any in the District. To a purchaser the crop now growing on the place will be sold, if desired, on the most favorable terms.

—ALSO—

His place situated at the junction of Little river and Cane creek, eleven miles from Pendleton and five from Pickens C. H., containing One Thousand Acres; forty of which is bottom land and under cultivation. It has on it an excellent Mill Site and Fishery, a comfortable Dwelling House, and other out buildings. There is

a good crop now growing on the place, the rent of which will be sold, if desired, to the purchaser of the place.

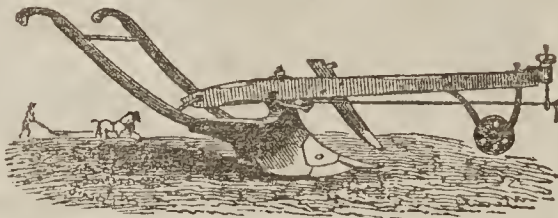
I. G. GAMBRELL.

Pendleton, S. C., Aug. 13, 1851.

The Laurensville Herald and Abbeville Banner will insert once a month for three months, and forward accounts.

I. G. G.

#### WHITMAN'S AGRICULTURAL WAREHOUSE, BALTIMORE, MD.



**T**HE UNPRECEDENTED and INCREASING INTEREST manifested in AGRICULTURE, and the liberal encouragement which has been given the subscriber, has induced him to engage in the MANUFACTURING business on an EXTENSIVE SCALE. His Factory and Warehouse is now the largest in Baltimore, and probably the most extensive in this country.

His stock for 1851 will consist in part of: 10,000 PLOUGHS embracing his PREMIUM PLOUGHS, and nearly every variety in use from Maine to California. 600 WHITMAN'S PREMIUM CULTIVATORS, at \$4, \$5 and \$6 each.

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500 PREMIUM STRAW, HAY and CORN-STALK CUTTERS, at 10, 12, 17, 23, 28 and \$37 each.

100 PREMIUM FODDER CUTTERS and GRINDERS, at 30, 35, and \$60.

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300 WHITMAN'S PREMIUM THRESHERS the cylinder of which we will warrant to last 100 YEARS, in constant use. This machine breaks less grain and threshes cleaner and faster than any other machine in use.—Price 45 and \$50. Additional price for STRAW CARRIERS, \$15.

100 WHEAT DRILLS which are perfect in their operation, and save enough in the seeding of fifty acres to pay the cost of the Drill.—Price \$100.

100 WROUGHT IRON RAILWAY HORSEPOWERS which received the FIRST PREMIUM at the Maryland State Fair in 1849 and 1850.—Price \$100

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A large stock of Chain and Suction Pumps, Water Rams, Ox-Yokes, Root-Pullers, Sausage-meat Cutters and Stuffers, Cow-Milkers, Churns, Post-hole Augurs, Agricultural Furnaces, Hoes, Rakes, Shovels, Spades, Garden and Horticultural Tools, and every description of Farm Implements found in this country.

—ALSO—

**FIELD and GARDEN SEEDS** of every variety.

**FRUIT and ORNAMENTAL TREES.** GUANO, and all the various kinds of FERTILIZERS in use, all of which will be sold at WHOLESALE and RETAIL as low as can be had in the United States, the quality considered.

A Catalogue of 120 pages, containing a description of our Implements and Machinery, will be forwarded gratis, if applied for by mail post paid—and all orders accompanied with cash or satisfactory references, will meet with prompt attention.

EZRA WHITMAN, JR.

corner of Light and Pratt Sts.,  
BALTIMORE, MD.

January 1, 1851.

#### THE SPANIARD.

**T**HIS magnificent SPANISH JACKASS, who has just made his entrance into America, will, as soon as he recovers from the effects, etc. of a long voyage, be ready for the work of procreation. He will have but one Station, and that at my Plantation, on Seneca River, Four Miles North-west of Pendleton Village.

An opportunity of rare occurrence is now offered the country, for the propagation of a splendid stock of Mules, whose superiority for agricultural purposes, will be admitted by all who have given them a fair trial.

In relation to this excellent JACK, suffice it to say,—he cost a great deal of money,—and for size form and action, was one among five of the best that could be procured in Spain by a special agent.

Pre-engagements should be made by all those who are anxious to put to him in the Fall, as his number will be limited to a few.

He will be let to a few Mares during his recovery this Summer.

#### TERMS.


Twelve dollars Insurance for Mares.

Twenty-five dollars Insurance for Jennets.

J. W. CRAWFORD.

Cold Spring, July, 1851. 8-1f

#### SUB-SOIL PLOUGHS.

 **T**HE undersigned is Agent for the sale of Dr. BROYLES' CELEBRATED SUBSOIL PLOUGH, the utility of which it is unnecessary here to mention, as its superiority over any other similar kind is proverbial.

A. M. BENSON.

Commission Merchant.

Hamburg, S. C., July, 1851. 7-1f